Eucalypt Groups

Group	Common Name	Species	Bark	Leaves
Bloodwoods	Red-flowering Gum	Ficifolia	Light grey, short fibred, scaly, persistent	8-15 × 3-5cm
Corymbia	Red Bloodwood	gimmifera	short fibred, tesselated	10-15 × 2-5cm
	Lemon-scented Gum	citriodora	Smooth, pale grey, flakes	10-16 × 2.3-7.5cm
	Spotted Gum	maculata	Smooth, grey, patches. Veins of leaves at large angle to mid vein. Red wood.	10-25 × 10.5cm
Stringybarks	Yellow	muellerana	gtey-brown, fibrous, fine textured to Small branches	9-14 × 1.5-2cm
	Brown	baxteri	fibrous to small branches	5-16 × 1.5-3cm
	Red	macrorhyncha	Long-fibred, grey outside to small branches	10-16 × 2-2.5cm
	White	globoidea	Grey-brown, thick, fir, & stringy to small	6-10 × 1.2-2.5cm
Ashes & Sallies	Messmate	obliqua	Pale brown, fibrous, persistent to small branches	9-16 × 1.5-3.5cm
	Alpine Ash	delegatensis	Wolly fibrous on lower branches, smooth. above, strips	10-20 × 1.5-3cm
	Mountain Ash	regnans	brown, sub-fibrous persistent for 5-20m smooth white or pale grey-green above long ribbons	10-17 × 1.5-3cm
	Prickly Stringybark	consideniana	Grey persistent to small branches, prickly. stiff fibred	9-18 × 1-2.5cm
	Silvertop	sieberi	Flaky grey to dark, persistent to upper branches, deeply furrowed with age	10-20 × 1.2-2.8cm
	Snow Gum	pauciflora	Smooth white with grey stripes,	6-19 × 3cm
	Black Sallee	stellulata	black, rough at base, upper trunk & branches	5-10 × 1.3-2.5cm
Peppermints	Shining	willisii	sub-fibrous & persistent at base but smooth & pale higher	8-15 × 1.8-2.5cm
	Narrow-leaf	radiata	brey-brown, persistent to smaller branches sub-fibrous or finely flaky	8-16 × 1.6-1.5cm
	Broad-leaf	dives	ditto	10-`5 1.5-2cm
	Gippsland	croajingalensis	Rough over trunk & larger branches, fibrous	8-12 × 1.2-2cm
Gums & Mahoganes	Southern Mahogany	botryoides	Dark grey or brown, thick but soft, short fibred and often fissued. veins - large angle none in area	10-15 × 4cm
	Mallees			
	Forest Red Gum	tereticornis	grey, irregular patches of colour, flaked	9-20 × 1-3cm
	River Red Gun	camaldulensis	ditto with patches red.	9-20 × 1-2cm
	Swamp Gum	ovata	Dark, hard & roughtof various heights, shed in ribbons	8-14 × 2-3cm
	Yarra Gum	yarraensis	Dark, rough, sub-fibrous or scaly to various heights, strips	6-10 × 1.2-3cm
	Strzelecki Gum	strzeleckii	Rough, fibrous to 10cm. branches, smooth above	to 15 × 2.5cm
	Brittle Gum	mannifera	Smooth powdery white/cream or grey, paches red, not ribbony	10-14 × 1-1.5cm
	Scentbark	aromapholia	Brown, coarse & fissued (W. Vic0	10-17 × 1-2cm
	Green Scentbark	fulgens	Rough to small branches, thick, furrowed, dark grey, branches salmon (E. of Melb)	7-15 × 1.8cm
	Grey Scentbark	ignorabilis	Rough, firm, spongy over trunk, ribbony on branches and smooth orangy	8-18 × 1.5-2cm
Viminalis Group	Silver-leaf Stringybar	cephalocarpa	Thick, soft, fibrous, fissued, grey or brown	to 20 × 1-2cm
	Bog Gum	kitsoniana	Smooth, grey, strips	9-16 × 1.5-3.5cm
	Buxton Gum	crenulata	Persistent, greyish, compact, fissued, Smooth on branches	4-7 rounded
	Apple Box	angophoroides	Grey scaly (box type) on trunk & large branches, juv. leaves stalked	12-24 × 1.8-2.8cm
	But But	bridgesiana	ditto juv. leaves sessile	12-24 × 1.5-2.5cm
	Long-leaf Box	goniocalyx	Grey, rough, persistent & scaly on trunk & large branches	10-24 × 1.5-3cm
	Mountain Grey-gum	cypellocarpa	smooth, grey, strips or plates	12-35 × 1-4cm
	Southern Blue-gum	globulus group	Rough, dark, persistent at base only, smooth higher, strips	12-30 × 1.7-3cm
	Manna Gum	viminalis group	dar. persistent at base, remainder smooth whitish, ribbons	10-20 × 1-2cm
	Mountain Gum	dalrymoleana	Smooth white or grey, strips or flakes	to 35 × 1-2.5cm

Eucalypt Groups

	Candlebard	rubida	Smooth, white, developing reddish plates dark and persistent at very base, strips	10-24 X1-2.4cm
	Silver Swamp Stringybark	conspicua	Dark, rough to small branches, fibrous, thick furrowed	12-16 X 2.5-3cm
Boxes	Coast Grey Box	bosistoana	Greyish, finely sub-fibrous or scaly lower trunk, smooth gum-like above	8-17 X .7-2cm
	Red Box	polyanthemos	Grey, fine box type persistent to small br.	5-10X 2-5cm
	Yellow Box	melliodora	Grey brown, rough, scaly, sub-fibrous, smooth upper trunk & limbs	6-12X .8-1.5cm
Ironbarks	White Ironbarks	leucoxylon	Dark rough, scaly at base, rest smooth mottled	9-14 X2-3.5cm
	Red Ironbark	sideroxylon	Hard, black, thick, deeply furrowed	8-14 X 1.2 x 1.8cm

Additions and Alterations from Census 2000 to 2002

E. astringens	naturalised in Victoria
E. costata subsp. murrayana	is now included
E. incassata	changed back to E. costata subsp. murrayana
E. kondininensis	naturalised in Victoria
E. occidentalis var. occidentalis	naturalised in Victoria
E. saligna	is now added
E. studleyensis	is now omitted

Eucalypts.

Euc conspicua To 45m bark rough to small branches, fibrous, thick, longitudinally furrowed. Crown blue-grey of juvenile, intermediate & adult leaves. Juvenile leaves sessile, opp for many pairs, orbicular to ovate, to 11.5 cm long glaucous. Adult leaves petiolate, alternate, broadly lanceolate to falcate, concolorous 12-16cm long, venation dense with numerous oil glands. Fruit sessile or shortly pedicellate .7x.8 cm, valves 3 or 4 level or exerted. Buds 7 (can be 3) operculum conical.

Euc ignorabilis 10-20 m, bark rough, firm, spongy over whole trunk, becoming ribbony on branches, smooth bark on branches. Juvenile leaves shortly petiolate, opp. for few nodes, broadly lanceolate to ovate. 10 cm long. green, adult leaves petiolate, alternate, lanceolate to falcate 8-18 cm concolorous, dull green to grey green, reticulation dense with obscure scattered oil glands. Buds 7 flowered. pedicellate .5x.5cm. disc raised, valves 3, exserted.

Euc fulgens has glossy green leaves & rough fibrous bark

Euc crucigenalensis to 30m. bark rough over trunk + larger branches, fibrous. Juvenile leaves sessile, opp. for many pairs to 8cm long; green to slightly glaucous. Adult leaves petiolate 8-12cm. concolorous, dull bluish-grey, reticulation sparse with numerous oil glands, buds numerous. glaucous., pedicellate fruit disc level., valves 3 or 4 rim level.

Euc kitsoniana to 8m. bark smooth, yellow, white or grey, often shedding ribbons. Juvenile leaves sessile for many pairs orbicular to broadly lanceolate to 10cm. light green, glossy above, becoming petiolate. Adult leaves alternate, petiolate, lanceolate to broadly lanceolate to 15cm to 3.5cm wide, glossy green, reticulation dense, coarse, with numerous glands. Buds 7 flowered, sessile. Fruit sessile .8x.8 disc level to raised Valves 3 or 4 rim level.

In area of Prom.

Corymbia citriodora (953) Lemon-scented Gum Queensland
" gummifera (953) Red Bloodwood NSW very East Vic
" maculata (953) Spotted Gum N.S.W
ficifolia Red flowering Gum probably as in same group in Costerman N.A.

Willis starts the key with the venation of the leaves.
McMahon separates firstly by buds mainly (including bud scars).
Costerman uses Pryor & Johnson's classification which divides eucalypts into 3 Sub-genus groups & then into 8 sections & then further into series.
Flora of Vic separates into 4 groups by inflorescence buds & operculum.
Rule separates first by canopy, then bark.
McMahon mentions habit mallee, small, medium, tall, very tall. with measurements for use later in key.
Bark Gum, rough later divided into Stringybark, Peppermint, Box, Compact, Ironbark, Bloodwood. Mahogany & Plate Bark.

Examples around here. Gum Bark - Manna Gum var viminalis - here
Ovata - ovate grandiflora ~~N~~ SW corner of Vic var ~~pyrar~~ pryoriana ssp Coast Manna Gum most of trunk here
Strzeleckie cygnitensis Rough barked " " all trunk. West Vic
Yarracensis Stringybark - Yertchuk.
Camphora ~~No~~
Cadens No Warby Ranges Peppermint. Radiata here & Dives not below straight line from Frillen to Warragul
Aggregata No. West of Melb. River Peppermint. Elata No.
Croajingolensis Yes.
Willisii var willisii Prom + inland NW of Yarran

36 series out of 93 species

Flora of Crust 500 species in 1988 20 groups.

Some Eucalypts of Moe

Eucalypts recorded in Edward Hunter Reserve

Eucalyptus conspicua	Swamp Stringybark
consideniana	Yertchuk
kitsoniana	Bog Gum
obliqua	Messmate
radiata	Narrow-leaf Peppermint

Eucalypts recorded for Bush Block in Newborough

Eucalyptus conspicua	Swamp Stringybark
dives	Broad-leaf Peppermint
globoidea	White stringybark
ignorabilis	Green Scent-bark
obliqua	Messmate
ovata	Swamp Gum
radiata	Narrow-leaf Peppermint

Euc radiata :- compact bark.
club shaped fruit. 8-16. slightly formed
Narrow-leaf Peppermint leaf. 8-16 cm dull grey green
Flowers Oct-Jan

Euc viminalis - bare trunk except for stocking.
Buds - 3 with fruit with large rim
Manna Gum with exserted valves.
leaves greener than above.
Bark ribbony + caught up on
lower branches.
Flowers Jan-May.

Euc bridgesiana - ~~rec~~ scaly - short fibre.
juvenile leaves opp. round
Apple Box with a bloom. - to
Adult leaves - longer petiole than above
4-7 buds + pointed
Flowers Feb. Apr.

Euc ovata — fruits in 7 - six in circle + 1 in middle
funnel-shaped
Swamp Gum Bark rough stocking
Flowers Mar - June

Euc pseudoglobulus — fruits + buds — pedicellate in 3
bicostata — " " sessile in 3.
globulus — " " single.
Blue Gums Sept. Jan.

Euc consideriana — Bark sharp
Buds club shaped - long pedunele
Yer chuk Leaf can be oblique on juvenile.
Flowers Oct-Dec
Scraggly tree.

Euc obliqua — Stringybark — fluffy bark
Leaves dark green — oblique.
Messmate. Fruit barrelshaped. Buds 7-15+
short pedicles & long peduncles.

brestata two ribbed - buds.
viminalis having long flexible shoots
pauciflora few flowered lateral veins
full length of leaf almost parallel with
midrib.
cypellocarpa goblet-shaped fruit.
heavy foliage.
regnans reigning undisputed
monarch. bark soft & felt-like.
tereticornis with cylindrical horn
cap quite long projecting outwards
like a horn
camaldulensis cap short & pointed
double operculum noticeable. 1st cap
thin & papery.
ovata egg-shaped - juvenile leaves.
cephalocarpa now divided heads of fruit.
obliqua not uncommon for 2/3 of
leaf area to be on one side of midrib.
One of first eucalypts described & named
from material collected in Van Diemen's
Land almost 2½ centuries ago.
bridgesiana doesn't form the panicles of bloom
which distinguish the true boxes.
polyanthus many flowered broad crown
with long drooping branches. glaucous
foliage

LATROBE VALLEY NATURALIST

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SURFACE MAIL

melliodora honey-scented
radiata ray-like (umbels).
dives rich.
sideroxylon iron-wood.
sieberiana bark / saplings blood coloured, followed by a stage with attractive lacy pattern; eventually the Land adult type. - silver white branches (or flowers) most fire resistant eucalypt.

Angophora aggeion a vessel goblet.
angeion
phoreo bear or carry.

Listania Listan French botanist

Eucalyptus Eu well kalyptos covered.

Changes to Eucalypts from Census 2000 to Census 2003

There are a number of species of Eucalypts added to Victorian flora that have an affinity to other species but as yet do not have a name

Eucalyptus aff. dalrympleana (Howman's Gap)
" aff. dumosa (Antwerp)
" aff. dumosa (Jeparit)
" aff. goniocalyx (Dandenong Ranges)
" aff. goniocalyx (Brisbane Ranges)
" aff. pauciflora (Benambra) is now Eucalyptus pauciflora subsp. pauciflora
" aff. porosa (Quambatook)
" aff. rubida (Moroka)
" aff. sabulosa (Grampians)
" aff. viridis (Mt. Jeffcott)
" aff. wimmerensis (Mt. Arapiles)

The following changes have also been made.

Eucalyptus alpina (in Willis) is now E. serraensis & E. verrucata
" aromaphloia (in Willis) is now E. aromaphloia (and affs.), E. fulgens, E. ignorabilis & E. sabulosa (and aff.)
" aromaphloia (in Flora of Victoria) is the right description (I think)
" aromaphloia subsp.1 (in Flora of Victoria) is now E. subulosa
" astringens is declared naturalised in Victoria " calycogona subsp. calycogona
" calycogona subsp. trachybasis is added
" cephalocarpa (in Willis) is now E. alligatrix, E. cephalocarpa, E. aff, cinera & E. conspicua
" costata subsp. murrayana is added
" kondininensis is declared naturalised in Victoria
" occidentalis var. occidentalis is declared naturalised in Victoria
" saligna is now added

Notes

Eucalyptus aromaphloia in Flora of Victoria has juvenile leaves oblong to elliptic, with more or less glaucous tips and is recorded for Grampians and s.w. to Ballarat & Brisbane Ranges and Anglesea.

Eucalyptus sabulosa (E. aromaphloia subsp. 1 in flora of Victoria) has juvenile leaves linear to narrowly oblong, glossy green at first becoming duller in non-growth period and is recorded in the Flora as Grampians to Cavendish to eastern Little Desert.

Eucalypt fulgens is recorded for Healesville to Latrobe Valley while Eucalyptus ignorabilis is recorded for Erica to eastwards in the Flora but also for Warragul and Morwell on the CD.

Eucalypt Species in Willis but not in Census Sixth Edition January 2000

Eucalyptus	capitillata	not in Census February 1984
	dealbata	not in Census January 1993
	haemastoma	not in Census February 1984
	intertexta	ditto
	langii	"
	longifolia	"
	numerosa	"
	paniculata	"
	pilularis	"
	piperita	"
	pulverulenta	"
	transcontinentalis	"
	vitrea	"
	woollsiana	"

Name Changes of Species in Willis

Eucalyptus	alpina	=	Eucalyptus verrucata
	aromaphloia	=	ignorabilis
	bicostata	=	globulus subsp bicostata
	cephalocarpa	=	conspicua
	cinerea	=	aff cinerea (Beechworth)
	foecunda	=	leptophylla
	gummifera	=	Corymbia gummifera
	maculata	=	" maculata
	maidenii	=	Eucalyptus globulus subsp maidenii
	nitida	=	willisii
	nortonii is a valid species now		
	pileata	=	Eucalyptus cyanophylla
	pryoriana	=	viminalis subsp pryoriana
	pseudoglobulus	=	globulus subsp pseudoglobulus
	st-johnii	=	globulus subsp pseudoglobulus
	stricta	=	kybeanensis
	studleyensis is now a valid species		
	sieberi is now a valid species		

Species in Census Sixth Edition January 2000 but not in Willis

Eucalyptus alaticaulis is under E. cypellocarpos in Flora of Victoria but is a valid species in Census. I have no other information

alligatrix has 2 subsp. Both in northern Victoria. Near E. conspicua in key.

brookeriana is in western and central Victoria and near E. yarraensis in key.

cadens in Beechworth and near E. camphora in key.

croaginolensis was originally aff E. radiata. Occurs from Marysville to East Gippsland. Differs from E. radiata in juvenile leaves more than 1.5cm., operculum hemispherical to conical. Differs from E. willisii in adult leaves thin-textured, dull bluish-grey

fulgens in Latrobe Valley . Differs from E. aromaphloia with adult leaves glossy-green not dull green to bluish-green

leucoxylon has 6 subsp. now but all are western Victoria.
mackintii .was sp. aff macrorhyncha. From Lakes Entrance to Orbost. Near E. agglomerata in key.
macmahonii – mallee type. Mt. Arapales & Mitre Rock. Between E. phenax & E. cyanophylla. in key.
maidenii subsp. williamsonii is in Census but I have no notes about it.
molyneauxii is a peppermint growing in Little Desert and comes next to E. willisii in key.
nortinii is in italics in Willis.now valid species. .Grows in northern Victoria, next to E. goniocalyx in key.
ovata var. grandiflora west and north-east of Portland. Buds 1.5cm long, 0.9cm diam., fruit to 1cm long 1.3cm diam., leaves with prominent oil glands.
phenax - north west Victoria; next to E. incrassata in key
sabulosa = E. aromaphloia ssp. 1 growing in Grampians; differs from E. aromaphloia in having juvenile leaves linear to narrowly oblong.
saxatilis grows in north east Victoria and is near E. glaucescens in key.
serraensus in Grampians and is between E. tricarpa & E. leucoxylon in key.
silvestris between Servicetown and Yanac; next E. wimmerensis in key with adult leaves sub-lustrous or lustrous and stems box-barked.
splendens - Mt. Richmond, coastal near S.A.; next to E. viminalis subsp. cygnetensis in key
strzelecki in Strzelecki Ranges next to E. ovata in key with juvenile leaves ovate to lanceolate and many more oil glands.
studleyensis .grows at Studley Park, Melbourne. Should be near E. camaldulensis but I have no notes. (Need 1922 paper)
tricarpa in Central Victoria and East Gippsland so perhaps near here. Next to E. leucoxylon in key but bark rough throughout, hard, furrowed, black (ironbark).
verrucata in Grampians. Between E. globulus subsp. globulus and E. serraensis.
victoriana in Grampians. Near E. baxteri in key. Was E. baxteri var victoriana.
wimmerensis in the Wimmera; Valid species in Census but under E. viridis subsp wimmerensis in Flora of Victoria.
yarraensis in southern Victoria; between E. brookeriana and E. camphora with juvenile leaves not or slightly discolorous, margin entire; bark rough to 10cm diam. branches.

Keys to Subspecies

Eucalyptus globules

1. Buds and fruits single	subsp. globulus	Wilsons Prom & Otways
1. Buds and fruits in 3s or 7s	2	
2. Buds and fruits in 3s	3	
2. Buds and fruits in 7s	subsp. maidenii	Upper Genoa & Cann R.
3. Buds pedicellate; coastal plains and hills	subsp. pseudoglobulus	North of Toongabbie & B'dale to Mallacoota
3. Buds sessile; tablelands and mountains	subsp. bicostata	North of Dividing Range & towards Orbost.

Eucalyptus pauciflora

1.Buds sessile, ovoid to oblong	subsp. hedraia	Endemic to Vic;.Falls Creek, Bogong area.
1. Buds shortly pedicellate	2	
2. Buds, fruit and young stems not glaucous; leaves bright glossy green	subsp. acerina	Alpine, Baw Baw, Mt. Useful
2. Buds and/or fruits and/or young stems glaucous	3	
3. Adult leaves 16cm long	subsp. pauciflora	Alpine & lowland -widespread
3. Adult leaves to 10cm long	subsp. niphophila	Mts. Hotham, Bogong & Wellington

Eucalyptus polyanthemos

1.Leaves of mature crown orbicular to ovate, 4-5cm long (2-)3.5-5cm wide	subsp. vestita	From Ararat east
1. Leaves of mature crown broadly lanceo-late to lanceolate 9-14 cm long 2.5-5cm wide	subsp. longior	near B'dale east to border

Eucalyptus willisii

1. Adult leaves to 13.5cm long, 1.8cm wide	subsp. willisii	Endemic Cranbourne to B'dale
1. Adult leaves 17cm long, 2.5cm wide	subsp. falciformis	West from Aireys Inlet to Mt. Gambier

Eucalyptus viminalis

1. Buds and fruits in 7s or mixed 3s and 7s, bark rough over whole trunk	subsp. cygnetensis	Western Victoria
1 .Buds and fruits in 3s	2	
2. Tree to 50m tall; bark smooth or rough on lower trunk for 2-6m; usually valleys & well- watered areas	subsp. viminalis	widespread & common
2. Spreading tree to 15m tall; bark rough over most of trunk; coastal plains	subsp. pryoriana	East from Bellarine Peninsular to LakeTyers

Kevin Rule's talk
26.4.96.

Gippsland Eucalypts

1. **Introductory comments-**
   - My background

2. **History of taxonomy in Victoria-**
   - Willis
   - Pryor and Johnson
   - Chippendale
   - Melb Uni, Latrobe Uni
   - My Projects
   - Johnson and Hill
   - Brooker

3. **Other Unresolved Victorian Taxonomic Problems**
   - Manna Gums
   - Peppermints
   - Snow Gums
   - Messmates
   - Yellow Gums
   - Blue Gums
   - Red Gums
   - Grey Boxes
   - Black Boxes
   - Swamp Gums
   - Stiff-leaved Mallees

4. **Problems of identification**
   - Hybrids
   - Abberations within populations and in seedlings
   - Normal variations within and between populations
   - Gradations between taxa
   - Undescribed taxa
   - Inadequate materials
   - Dried herbarium specimens
   - Feral populations
   - Inadequate keys

5. **Criteria for identification**

Bark; smooth or fibrous (ironbark, stringybarl, peppermint, box, etc.)
Inflorescence; buds/ cluster, simple or compound, peduncle length and shape
Habit; tree or mallee
Lignotuber- present or absent
Cotyledons- fan-shaped or bisected

Seedling morphology- phyllotaxy,stem structure, juvenile leaf size, shape, colour, lustre, venation, ontogeny, etc.

Adult leaves- nodal dispersion, petiole length, size, shape, colour, lustre, venation, glands, margin, apex, etc

Buds- shape, size, number and scar, pedicel length, ornamentation, operculum size and shape

Floral Parts- filament colour, filament orientation, anther shape, number of locules, number of ovular rows, shape of style

Fruits- size, shape, colour, ornamentation, orientation of disc, orientation of valves, depth of valves

Seeds- shape, size, colour, texture

Other criteria- DNA, volutile oils

6. **The Key For Gippsland Eucalypts**

Assumptions

7. **Scentbark Study**

KEY TO EUCALYPTS OF GIPPSLAND (NOT FOR PUBLICATION)

1(a) Mature canopy dominated by pre-adult leaves.....2
(b) Mature canopy dominated by adult leaves.....3

2(a) Buds diamond-shaped, pedicellate.....*E. conspicua*
(b) Buds ovoid, sessile, tightly clustered.....*E. neglecta*

3(a) Bark hard, deeply furrowed, black or greyish, impregnated with kino (ironbark)
or deeply furrowed, greyish, fibrous, closely matted, ironbark-like on the lower trunk
.....
4
(b) Bark smooth or fibrous but not resembling an ironbark.....5

4(a) Inflorescences 3-flowered.....*E. tricarpa*
(b) Inflorescences 7-flowered.....*E. sieberi*

5(a) Adult leaves discolorous.....6
(b) Adult leaves concolorous.....9

6(a) Fruits urnshaped.....*E. gummifera*
(b) Fruits cup-shaped or hemispherical to sub-globular.....7

7(a) Discs of fruits ascending.....*E. angophoroides*
(b) Discs descending.....8

8(a) Fruits < 7 mm wide.....*E. botryoides*
(b) Fruits 8 - 10 mm wide .....*E. muelleriana*

9(a) Fruits with stamenophore.....*E. melliodora*
(b) Stamenophore absent.....10

10(a) Inflorescences stellate in appearance (buds fine,horn-shaped)..... *E. stellulata*
(b) Inflorescences not stellate in appearance.....11

11(a) Adult leaves with parallel veins.....12

(b) Adult leaves with mid-vein dominant.....14

12(a) Buds strongly waxy.....*E. pauciflora* subsp. *niphophila*
(b) Buds non-waxy.....13

13(a) Fruits 8 - 11 mm wide.....*E. pauciflora* subsp. *pauciflora*
(b) Fruits 5 - 7 mm wide.....*E. pauciflora* subsp. *acerina*

14(a) Buds conspicuously or moderately warty.....15
(b) Buds non-warty.....19

15(a) Buds non-waxy; bark stringy throughout.....*E. baxteri*
(b) Buds waxy; sub-fibrous bark, if present, confined to lowest trunk.....16

16(a) Inflorescences 7-flowered.....*E. maidenii*
(b) Inflorescences 1 to 3-flowered.....17

17(a) Buds shortly pedicellate; fruits < 1.3 cm wide.....*E. pseudoglobulus*
(b) Buds sessile; fruits wider than 1.4 cm.....18

18(a) Inflorescences 3-flowered; fruits 14 -18 cm wide, 2-ribbed.....*E. bicostata*
(b) Inflorescences 1 - 3-flowered; fruits wider than 2 cm, 4-ribbed....*E. globulus*

19(a) Tall forest trees; inflorescences axillary, paired.....20
(b) Trees and mallees of various heights; paired inflorescences absent.....21

20(a) Bark on lower trunk as a compact, rough stocking.....*E. regnans*
(b) Fibrous bark persistent throughout.....*E. fastigata*

21(a) Tall forest trees of alpine regions with a stocking of fibrous bark often extending to mid-trunk, clavate buds and pyriform to globose-truncate fruits with valves enclosed.....*E. delegatensis*
(b) Trees and mallees not of the above combination of habitat, bark, buds and fruits.....22

22(a) Bark smooth throughout or rough bark confined to the base or lower trunk...23
(b) Bark rough throughout or rough bark as a stocking extending to at least mid-trunk.....45

23(a) Forest trees of East Gippsland with ovoid-urceolate fruits with valves deeply enclosed.....24
(b) Trees and mallees of various heights with fruit shapes and valves not as above.....25

24(a) Bark smooth to the ground, light grey to yellow with darker patches.....
.....*E. maculata*
(b) Rough basal bark present.....*E. fraxinoides*

25(a) Buds 7 or more per inflorescence.....26
(b) Buds 3 per inflorescence.....39

26(a) Small to medium trees with smooth mottled bark, beaked or horn-shaped opercula and fruits with ascending discs.....27
(b) Trees and mallees without the above combination of habit, opercula and fruits.....29

27(a) Buds globular with prominantly beaked opercula.....*E. camaldulensis*
(b) Buds horn-shaped.....28

28(a) Fruits 6 mm or wider..... .....*E. tereticornis*
(b) Fruits > 6mm wide.....*E. blakelyi*

29(a) Mallees or small trees with lustrous green foliage, bark smooth to the ground, buds sessile.....30
(b) Mallees and trees without the above combination of foliage, bark and buds..31

30(a) Adult leaves > 2 cm wide.....*E. kitsoniana*
(b) Adult leaves about 1 cm wide.....*E. kybeanensis*

31(a) Smooth-barked sub-alpine mallees with makedly domed, pedicellate fruits.....
.....*E. smithii*
(b) Trees and mallees of various regions without the above combination of bark and fruits.....32

32(a) Peduncles flattened (strap-like).....33
(b) Peduncles angular or round in section.....35

33(a) Juvenile leaves green on upper surface.....*E. cypellocarpa*
(b) Juvenile leaves glaucous.....34

34(a) Adult leaves with denticulate margins.....*E. denticulata*
(b) Adult leaves with smooth margins.....*E. nitens*

35(a) Bark smooth throughout, powdery and white with reddish spots, juvenile leaves narrow-elliptical.....*E. mannifera*
(b) Basal bark rough or apparently so; bark on trunk not powdery; juvenile leaves lanceolate or ovate to sub-orbicular.....36

36(a) Juvenile leaves opposite, sessile; fruits hemispherical or pyriform....*E. elata*
(b) Juvenile leaves alternate, petiolate; fruits obconical.....37

37(a) Adult leaves dull; petioles 3 - 4 cm long.....*E. camphora* subsp. *humeana*
(b) Adult leaves lustrous; petioles 2 - 3 cm long.....38

38(a) Growth tips at all leaf stages lightly waxy; adult leaves markedly glandular...
.....*E. strzeleckii*
(b) Growth tips always non-waxy; adult leaves sparsely glandular.....*E. ovata*

39(a) Buds waxy.....40
(b) Buds non-waxy.....42

40(a) Fruits campanulate with ascending discs.....*E. saxatilis*
(b) Fruits cupular with descending discs.....41

41(a) Juvenile leaves connate; fruits 6 - 8 mm wide.....*E. perriniana*
(b) Juvenile leaves non-connate; fruits 8 - 11 mm wide.....*E. glaucescens*

42(a) Bark loose, sub-fibrous about the base or extending over the lower trunk; juvenile leaves lanceolate, green.....*E. viminalis* subsp. *viminalis*
(b) Bark smooth to the ground; persisting plates of old bark present on some trees; juvenile leaves broad-ovate, cordate or orbicular.....43

43(a) Bark white with old reddish plates persisting; juvenile leaves orbicular, (emarginate); adult leaves grey-green.....*E. rubida* subsp. *rubida*
(b) Bark various colours; juvenile leaves with a distinctive point; adult leaves green.....44

44(a) Tall forest trees; adult leaves 15 - 25 cm long; fruits shortly pedicellate.....
.....*E. dalrympleana* subsp. *dalrympleana*
(b) Alpine mallees and small trees; adult leaves < 10 cm long; fruits sessile.....
.....*E. alaeophloia*

45(a) Inflorescences 3-flowered.....46
(b) Inflorescences 7-flowered or more.....47

46(a) Buds waxy.....*E. chapmanniana*
(b) Buds non-waxy.....*E. pryoriana*

47(a) Peduncles flattened (strap-like).....48
(b) Peduncles angular or round in section.....49

48(a) Buds and fruits waxy.....*E. nortonii*

(b) Wax absent from all adult structures.....E. goniocalyx

49(a) Buds waxy.....50
(b) Buds non-waxy.....54

50(a) Inflorescences in a leafless panicle.....51
(b) Inflorescences axillary.....52

51(a) Adult leaves broad-ovate.....*E. polyanthemos* subsp. *vestita*
(b) Adult leaves lanceolate.....*E. polyanthemos* subsp. *longior*

52(a) Juvenile leaves cordate or orbicular; buds diamond-shaped,sessile.....
.....*E. cephalocarpa*
(b) Juvenile leaves lanceolate (broad or narrow); buds clavate or fusiform, pedicellate.....53

53(a) Juvenile leaves broad-lanceolate; buds clavate with obtuse opercua.....
.....*E. croajingolensis*
(b) Juvenile leaves narrow-lanceolate; buds fusiform with conical opercula.....
.....*E. robertsonii*
54(a) Valves enclosed within the fruits.....55
(b) Valves approximately at rim level or exerted.....57

55(a) Bark short-fibred (box-like); fruits thin-walled, < 7 mm wide.....*E. bosistoiana*
(b) Bark long-fibred (sringybark); fruits thick-walled, 7 - 11 mm wide.....56

56(a) Fruits cupular or sub-cylindrical, 9 - 12 mm long.....*E. obliqua*
(b) Fruits globose-truncate, 6 - 7 mm long.....*E. yanguora*

57(a)Fruits globose with rim at its equator, 8 - 12 mm wide.....*E. macrorhyncha*
(b) Fruits not of the above combination.....58

58(a) Tall forest trees with compact bark, fibrous bark extending as a stocking to the upper trunk; pedicels as long as fruits.....*E. smithii*
(b) Smallish, often spreading trees with rough bark throughout; pedicels no more than half the length of the fruits.....59

58(a) Buds diamond-shaped; fruits obconical; adult leaves undulate.....
.....*E. yarraensis*
(b) Buds clavate or ovoid; fruits various shapes but not obconical; adult leaves not
undulate.....60

60(a) Bark sub-fibrous, deeply furrowed, chunky or stringy; 61
(b) Peppermint bark.....67

61(a) Juvenile leaves opposite and sessile for numerous pairs.....62
(b) Juvenile leaves alternate and petiolate..... 63

62(a) Juvenile leaves sub-obicular, glaucous, crenulate; fruits 6 - 7 mm wide.....
.....*E. bridgessiana*
(b) Juvenile leaves lanceolate, green, entire; fruits 8 - 9 mm wide.....
.....*E. pryoriana*

63(a) Bark stringy; fruits 7 - 12 mm wide.....64
(b) Fruits 4 - 7 mm wide.....66

64(a) Valves of fruits prominantly exerted.....*E. mckintii*
(b) Valves of fruits at rim level.....65

65(a) Adult leaves blue; fruits irregularly angular.....*E. agglomerata*
(b) Adult leaves green; fruits round.....*E. globoidea*

66(a) Adult leaves dull, grey-green; bark thin, finely furrowed.....*E. ignorabilis*
(b) Adult leaves lustrous and green; bark thick, chunky, often deeply furrowed.....*E. fulgens*

66(a) Bark with a fine prickle-like texture; juvenile leaves petiolate, ovate, blue; fruits pedicellate.....*E. consideniana*
(b) The combination of bark, juvenile leaves and fruits not as above.....67

67(a) Juvenie leaves cordate with waxy petioles.....*E. dives*
(b) Juvenile leaves lanceolate without waxy petioles.....68

68(a) Adult leaves dull.....*E. radiata* subsp. *radiata*
(b) Adult leaves lustrous.....*E. willisii* subsp. *willisii*

K. Rule
26.4.96.

Classification of Gum Trees

KEY TO THE GROUPS

Bark whitish, smooth (or at times peeling off in ribbons)		A
Bark persistent, at least for 20 feet		B
A	Veins diverging from 30° or more	Gums
	Veins longitudinal or almost so	Snow Gums
B	Lateral veins close together, upper surface darker	C
	Lateral veins not very close together, upper surface not darker	D
C	Bark tessellated, inflorescence a panicle	Bloodwoods
	Bark fibrous, inflorescence an umbel	Mahoganies
D	Bark distinctly fibrous	Stringybarks
	Bark not fibrous	E
E	Inflorescence usually a panicle	Boxes
	Inflorescence an umbel	F
F	Bark black, hard, deeply corrugated	Ironbarks
	Bark not hard, not corrugated	G
G	Operculum small. Juvenile leaves not orbicular	Peppermints
	Operculum as long as calyx tube, juvenile leaves orbicular	False Boxes

KEYS TO THE IDENTIFICATION OF SPECIES

GUMS

Bark smooth, not persistent, periodically shed. Colour may vary through the year. Buds in umbels. Plate IV B.

Lateral veins 30° or more. Plate V B		A
Lateral veins less than 30°, mostly longitudinal. Plate V D		Snow Gums
A	Trees with flowers, buds and fruits, singly or in threes	B
	Trees with flowers, buds and fruits, in more than threes	E
B	Buds and fruits angled or warted. Plate VIII A	Blue Gum
	Buds and fruits smooth	C
C	Buds conspicuously long stalked	White Ironbark
	Buds shortly stalked	D
D	Juvenile leaves orbicular, glaucous, stems commonly brightly coloured. Plate VI B	Candlebark Gum
	Juvenile leaves lanceolate, green, stems white. Plate VI A	Manna Gum
E	Fruit valves widely exsert, rim almost horizontal to ascending	F
	Fruit valves enclosed or almost so, rim not ascending	G
F	Operculum conical, longer than calyx tube. Plate VIII F	Forest Red Gum
	Operculum hemispheric, beaked. Plate VIII G	River Red Gum
G	Tall tree, bark grey, blotched	Mountain Grey Gum
	Scraggy tree, bark dirty green, foliage glossy	Swamp Gum

SNOW GUMS

Bark smooth, leaves with longitudinal veining.	
Leaves 3-6 in. long, bark white, operculum hemispheric	Snow Gum
Leaves small, $1\frac{1}{2}$-3 in. long, bark greenish, operculum conical	Black Sallee

IRONBARKS

Bark usually thick, black, corrugated. Fruits large, long stalked.	
Bark black, very hard, deeply fissured	Red Ironbark
Bark smooth, soft, gum bark. (See under Gums)	White Ironbark

BOXES

Bark compact, usually greyish, persistent. Inflorescence a panicle (except false Boxes and, sometimes, Yellow Box).

Inflorescence a panicle, juvenile leaves not opposite, true Boxes	A
Inflorescence an umbel, juvenile leaves opposite, false Boxes	D

Classification of Gum Trees

A	Leaves very broad, glaucous, often broader than long, fruits conical	Red Box
	Leaves not glaucous, narrow, or comparatively so	B
B	Confined to the N.W. Bark black, hard	Black Box
	Widespread, fruits over $\frac{1}{6}$ in. long	C
C	Leaves narrow, fruit hemispheric	Yellow Box
	Leaves broadish, fruit elliptical	Grey Box
D	Peduncles flattened, valves almost enclosed	Long-leaved Box
	Peduncles round, valves exsert	Apple Box

STRINGYBARKS

Bark fibrous, persistent on trunk, umbels of several flowers.

Bark persistent on the whole or part of trunk		A
Bark persistent on trunk and branches		B
A	Bark only on lower part of trunk (found only above 3,000 feet)	Alpine Ash
	Bark extending along the trunk, branches white	Silvertop
B	Juvenile leaves opposite	C
	Juvenile leaves not opposite	D
C	Fruits stalked, in threes	Manna Gum
	Fruits sessile, more than three	Mealy Stringybark
D	Valves of fruit exsert	E
	Valves of fruit flush or enclosed	F
E	Junction of rim and calyx tube widest part of fruit	Red Stringybark
	Junction of rim and calyx tube above widest part	Brown Stringybark
F	Valves enclosed, fruit elliptical	Messmate
	Valves flush	C
G	Leaves small, fruit $\frac{1}{4}$ in.	White Stringybark
	Leaves large, fruit nearly $\frac{1}{2}$ in.	Yellow Stringybark

PEPPERMINTS

Bark compact, soft, slightly scaly, operculum very small, fruit small, hemispheric, rim flat or almost so.

Trunk half barked		A
Trunk full barked		B
A	Leaves broad, buds 8 to 10 in the umbel	Mountain Ash
	Leaves narrow, buds very numerous	River White Gum
B	Leaves bluish, very broad, thick	Broad-leaved Peppermint
	Leaves green, narrow, thin	Narrow-leaved Peppermint

GROUP	COMMON NAME	BOTANICAL NAME
LOODWOODS	Bloodwood	*E. gummifera*
AHOGANIES	Gippsland Mahogany	*E. botryoides*
UMS	Manna Gum or White Gum	*E. viminalis*
	Candlebark	*E. rubida*
	River Red Gum	*E. rostrata*
	Forest Red Gum	*E. tereticornis*
	Swamp Gum	*E. ovata*
	Blue Gum	*E. globulus*
	Mountain Grey Gum	*E. goniocalyx*
SNOW GUMS	Snow Gum	*E. pauciflora*
	Black Sallee	*E. stellulata*
IRONBARKS	Red Ironbark	*E. sideroxylon*
	White Ironbark or Yellow Gum	*E. leucoxylon*
BOXES	Grey Box	*E. hemiphloia*
	Yellow Box	*E. melliodora*
	Red Box	*E. polyanthemos*
	Black Box	*E. largiflorens*
	Long-leaved Box (False Box)	*E. elaeophora*
	Apple Box (False Box)	*E. Stuartiana*
STRINGYBARKS	Red Stringybark	*E. macrorrhyncha*
	Brown Stringybark	*E. capitellata*
	Yellow Stringybark	*E. Muelleriana*
	White Stringybark	*E. eugenioides*
	Messmate	*E. obliqua*
	Alpine Ash	*E. gigantea*
	Silvertop	*E. Sieberiana*
	Mealy Stringybark (False)	*E. cinerea*
PEPPERMINTS	Narrow-leaved Peppermint	*E. radiata*
	Broad-leaved Peppermint	*E. dives*
	Mountain Ash	*E. regnans*
	River White Gum	*E. numerosa*

Euc	radiata	Peppermint - Narrowleaf.
Euc	viminalis	Manna Gum
Euc	bridgesiana	Apple Box / Red Bud.
Euc	ovata	Swamp Gum
Euc	pseudoglobulus	Blue Gum
Euc	considenciana	Yertchuk.
Euc	obliqua.	Messmate

Eucalyptus unnamed

2008 March 5. Alix gave us specimen from Yallourn Power Station bush block on corner of Hermes Oak Rd & Old Haunted Hills Road (old pumping station). Mark told Alix that Rob Rual is naming this as a new species of stringybark as a hybrid of two local trees.

Leaves Largest leaf 13 cm long 3.5 cm wide
Midvein mostly not in centre of leaf & margins not leaving petiole at same place as leaves mature. Margin entire & reddish. Veins app. 30° from midrein. Leaves alternate.

Petiole app. 1.5 cm; yellow.

Stem brown smooth.

Fruit Only one on specimen. Flat on top with depressed centre, wide rim, 1 cm across app 7 mm deep, so short a pedicle as to be almost sessile. More than 1 fruit but can't see only 2 places of attachment. Valves not open.

Upper fine branches or stems yellow.

Alix said name would have something to do with flat top.

Eucalyptus albens White Box

1999 Jan 23rd/4th Identified by James Turner on Eucalypt weekend.

Eucalyptus angophoroides Apple-topped Box

1991 Jan 25th Trees growing at Picnic Area on Stony Creek not far on homeward side of Buchan turnoff ~~from~~ on Bruthern/Nowa Nowa Road. Tree similar to Apple box but different enough to make us look for fruit to check.

2003 Mch Recorded in Eel Hole Ck/Cemetery Conservation Reserve Management Plan!

Eucalyptus baxteri Brown Stringy-bark

1971 Sept 1. Plants growing in the Grampians.
Study - according to "Buds + Fruits" stalk to fruits small enough to be hidden by right ball of fruit. Valves much exerted.

1991 Oct 12 Plants growing in picnic area at Mt Heddrick.

1995 Oct 25 " " " " " "

2000 Dec 3rd Andrew Green identified in Sweetwater Ck. Res.

2006 Nov 4th Growing at Springsure area.

Eucalyptus behriana Bull Mallee

1992 Aug 28th Growing in little Desert.
Identified by Mr Lindner.

~~glob~~

Eucalyptus (bosistoana.) Cupps. Grey Box.

1982 Aug. Growing in Mullungdung along Boundary Rd between 5th. Cipp. Hway & North South Road. Trunk like Yellow Box. Upper branchlets show white where bark has lifted. Because some trees were fallen we found buds + fruits otherwise bud + fruits very hard to come by. Fruit – disc considerably recessed with valves about 5 or 6 giving star-like effect inside fruit. Fruit small stalked. Buds 3-7 Small leaves.

Also growing around Lake Tyers – see slides

Eucalyptus bosistoana P.2 Gippsland Grey Box.

1971 Jan 17th Trees growing at Seaton.

Eucalyptus botryoides — Southern Mahogany

1971 Aug 22nd Plant growing in Lakes National Park – Loch Spark.

1989 Feb 24th Plants growing in West Gully (east of Howletts Road) in Yallourn area. One tree flowering. See Euc. robusta for reason for tree being in this area.

1994 Nov 1 Growing in Casuarina Reserve Fulham – planted specimen.

2002 Nov 30th Growing at Toongabbie Wetlands.

Eucalyptus bridgesiana (Apple-box)

1968 Jan 28th Flowering on Wolfe's property
1969 Oct 18 " " Rosedale.
1993 Jan 30th Plants growing in Ennundra N.P. Beautiful tall specimens.
1994 Nov 26th Plants in APM block Stradbroke Sth. Gipp. Hway.
Oct 30 " " Dawson Water Reserve
" " " Rway "
1995 Nov 11th " " Railway Reserve near Traralgon.

Kevin Rule spoke to club in April 1996 and showed that some of our E. bridgesiana were really E. angophoroides Juvenile leaves are stalked but E. bridgesiana(j) leaves very soon become stalked so will have to do more work on this species.

2002 Nov 30th Growing at Toongabbie Wetlands.

Eucalyptus cadens. Nason's Trees.

1984 May Collected specimens for Neville Scarlett from near dam on Doreen Nason's property when Ellen was there.

~~1999 Jan 23 A Ident~~

1989 In Muelleria Vol 7/1 Apr. 1989 Key to this species + some other swamp gums. Description + diagrams of species P. 7.

Eucalyptus camphora. Mountain Swamp Gum

991 Jan 29th Plant growing at orchid spot near a stream on Wullgulmerang / Benambra Road.
Newsletter 3·2 to 3rd edition of census says it is now named E. camphora subsp. humeana.

1993 Jan 31st Plants growing in Errinundra N.P. list from DCNR says they are ssp. humeana still Mountain Swamp Gum

1999 Jan 23-24th Identified by James Turner on Cielantipy weekend.

1989 In Muelleria Vol 7/1 Apr 1989 Key separating this species from E. eaulens, E. aggregata + E. yarraensis also notes.

Eucalyptus cephalocarpa. Silver-leaf Stringybark

1978 Jan 1978 Synonymous + deleted E. cinerea Pryor + L.A.S. Johnson Aust. Nat. Univ. Canb. 64 (1991) [C. Beauglehole + R. Parsons]

1995 Dec 12" APM Stradbroke.

1996 Aug 3rd Endiviek hand-care area.

2013 June E cephalocarpa as per Willis is divided into 4 species E. alligatrix, E. cephalocarpa, E. iff cinerea and E. conspicua. E. cephalocarpa is per Blakely's key.

Eucalyptus aff cinerea (Beechworth)

1984 Growing in regeneration area on Harrups Highway in Mullungdung Forest.

Juvenile leaves very big on regeneration area 4½" long and 5"+ wide.

Plants grow in Boola Boola Forest on Cowwarr Road.

This species is recorded in Flora of Victoria Part 3 as only growing north of Beechworth flowering Oct-Dec. Above is probably

E. conspicua.

Eucalyptus cladocalyx Sugar Gum

1971 Aug 30 Plants growing in the Grampians but Costermans says they will have originally been planted somewhere in the area as they are a native of S.A. but extensively planted along roads + in parks esp in north + west Victoria.

Eucalyptus consideniana (Prickly Stringybark) or. Yerchuk.

1969	Nov 26th	Flowering	in	Cormandale Reserve.
1970	Oct 17	"	at	Briagalong.
1994	Nov 26th	"	in	APM block Broadbroke Sth Cupp. H'way.
	Oct 28th	"	in	Tigon Sth Reserve.
1995	Oct 25	"	"	Mt Heddrick.
2000	Dec 3rd	Growing	in	Sweetwater Ck. Reserve.
2001	Dec 1	"	"	Sandy Ck. Bush, Neweborough.

Eucalyptus conspicua. Swamp Stringybark

1997 May 17 Trees growing on north side of swamp at pumping station at corner of Haunted Hills Rd & De Campo Drive Yallourn.

This tree has glaucous leaves and is part of the Euc cinerea complex.

This tree differs from E. cinerea in key in Flora of Victoria Vol 3. as this species has crown predominately adult with some broadly lanceolate intermediate leaves. ; while E cinerea has crown predominately juvenile with opposite, sessile, orbicular to broadly ovate leaves.

E. conspicua: adult leaves dull. Crown ~~dull~~ blue-grey of juvenile, intermediate & adult leaves. Juvenile leaves sessile, opposite for many pairs, orbicular to ovate, glaucous, adult leaves petiolate, alternate, broadly lanceolate to falcate, dull grey-green to glaucous, reticulation dense with numerous island oil glands. Inflorescence 7 (rarely 3) flowered.

In Victoria from near Yallourn to Genoa. Flowers Jan - May.

2001 Aug 27 Recorded in Newborough bush.

costata.

Eucalyptus (incrassata) Yellow Mallee.

1912 Aug 28th Plant growing in Little Desert + identified by Mr. Lindner.
Small buds 3 - 7 cap as long as calyx,
bud stem flattened.

Eucalyptus croajingolensis Gippsland Peppermint

2001 Dec 1. Juvenile leaves of this species recorded by John Topp in Sandy Ck Bush, Newborough. Book says sessile, opposite in many pairs oblong elliptic to 8 cm long & 3.5 cm wide whereas E radiata has same but are elliptic then lanceolate 6-7 cm long & 0.7 – 1.5 cm wide. These juvenile certainly looked wider than that. In key states E. dives has broadly ovate ~~leaf~~ juvenile leaves to ~~3~~ ? cm wide, whereas the other two to 3.5 cm Then E. radiata to 1.5 cm & E croajingolensis more than 1.5 cm. In E croajingolensis adult leaves are thin textured, dull bluish-grey, rarely green. I think it is recorded for this area.

1999 In Muellenia Vol 12 (2) 1999 Key to Vic Peppermints by K. Rule P. 165.

2005 Nov 5 Growing at Tom Simpson's Bush Block at Trafalgar Vic. Juvenile leaves are mid-way between E radiata & E. dives.

Eucalyptus cypellocarpa — Mountain Grey Gum

1971	Oct 23rd	Flowering in Morwell Nat. Park.
	Aug 30	Plants growing in the Grampians. Seed cups with single ridge.
1993	Jan 30	Trees growing in Errinundra N.P. Beautiful tall specimens.
1991	Oct 12	Growing at Mt Hedrick
1997	Apr. 5th	" in APM Reserve — Grand Ridge Rd.
2000	Dec 3rd	" " Sweetwater Ck. Reserve.
2004	Apr 3	" " Colley's Rd Block

Eucalyptus dalrympleana. Mountain White Gum

1992 Jan 30th Growing at Mr Howitt.
1992 Jan 25th Flowering at Angler's Rest.
1993 Jan 31st Trees growing in Errinundra N.P.
1995 Jan 15th " " on Dargo weekend.

Eucalyptus ~~glaucos~~. delegatensis Alpine Ash

1992	Jan 30th	Growing at Mt Howitt.
1993	Jan 3rd	Trees growing in Errinundra N.P.
1994	Nov 9th	" " on Wedge weekend
1995	Jan 15th	" " " Dargo "
1997	" 19th	" " " Mt. Baldhead.

Eucalyptus dives Broad-leaf Peppermint

1991 Jan 26th Plants growing along Tullach Ard Rd. near Gelantipy. This tree is recorded for Moondarra S.P. but we were not sure we found it.
Bob Auchterlonie identified a tree of it at the end of Lime Pit Rd. Rosedale.
Trees near Gelantipy were identified by James Turner.

1993 Jan 30th Trees growing along roadsides in Errinundra N.P. These leaves were quite bluish & the habit of the trees drooping towards road but was this because of extra light?

1994 Nov 6th Trees recorded on Licola weekend
1995 Jan 15th " " " Dargo "
1996 Dec " " " Early Road Mac.
2004 Aug 27th " " in Newborough bush.
Dec " " " " Sandy Ck.

1999 In Muelleria Vol. 12(2) 1999 Key to Victorian Peppermints by Rule P 165.

Eucalyptus dumosa — Dumosa Mallee.

1972 Aug 28th Plant growing in Little Desert
Fruit with centre exerted to above ring
Peduncles rather flat.
Identified by Mr Lindner.

Eucalyptus elata. River Peppermint.

1993 Jan 31. Trees growing in Errinundra area.
We also know these trees from the Lakes Entrance area.

1999 In Muelleria Vol 12(2) 1999 Key to Vic. Peppermints by K Rule. P 160.

E. fulgens.

Eucalyptus Aromaphloia Vic. Nat. Dec. 1954

A small to medium-sized, round-headed tree sometimes attaining about 20 metres (65 ft.); branches usually wide-spreading and often low down on trunk.
Bark except on smaller branches, rough greyish, persistent, subfibrillose, rather spongy, often deeply fissured and always very aromatic (when rubbed or crushed) - in texture somewhat intermediate between the "box" and "stringybark" types. Timber pale, pinkish-brown, moderately hard and heavy (48-66 lb. per cub. ft.), but not durable, apt to warp and snap and of use only as a second-rate fireweed. Cotyledons bat's-wing-shaped, the lamina much broader than long (about 1.5 X 4-5 mm.) Juvenile Leaves often slightly glaucescent, opposite for 8 or more pairs and then becoming alternate, 2-8 cm. long, obtuse to subacute, f from broadly elliptical (at Creswick) to linear (Stawell), contracted toward the base where sessile (in the first 8 or 10 pairs), later shortly petiolate; coppice shoots at Creswick with sub-rotund, very "gummy" purplish-glaucous leaves. Adult foliage green, narrowly to broadly lanceolate, acuminate, sometimes tending to falcate; petioles 1-2 cm. long and blades 4-14 x 1-2.5 cm. Veins of leaves fairly prominent, the lateral 15-30 on each side of mid-vein to which they are inclined at an angle of 20-45 deg.; intramarginal vein 0.5-2.5 mm. from the leaf-edge. Inflorescence an axillary "umbel" of 7 flowers (rarely more or less), the common peduncle terete or slightly flattened and 3-6 mm. long, sometimes glaucescent (Creswick). Buds smooth, rather lustrous, distinctly pedicellate to subsessile, shortly fusiform, subobtuse, 5-7 x 2-3 mm.; calyx tube obconic, 3-4 mm.; operculum subhemispheric to broadly conical, obtuse or rarely subacute with a short beak, about half the length of calyx tube. Style short and thick, 2-3 mm. long, with slightly swollen stigmatic apex. Stamens white, numerous, about 6 mm. long; anthers versatile, about 0.4 mm. long, broadly obovate-oblong, with parallel loculi dehiscing in broad longitudinal slits, bearing a conspicuous broad gland on the back of the connective. Fruit subhemispherical to broadly pyriform, typically 5-7 x 4-6 mm.; disc prominent, about 1 mm. wide, sloping upwards; valves 3-4, very broadly deltoid (2-4 mm. wide), erect, exserted. Seed subapiculate, irregularly angular and minutely rugulose, about 1.5 - 2 x 1 mm., black and contrastingwith the numerous rufescent abortive ovules. Flowering period; February to April, some blossom appearing every year. Habitat: Lower valley slopes or flats, avoiding dry ridges, swampy areas and basaltic formations, usually clay soils. Distribution: In Victoria from Poolaigelo near the South Australian border through Coleraine, Balmoral and Muchong Creek (Black Range) around the southern fringe of the Grampians to Moyston, Stawell, Ararat, Beauford, Linton, Ballarat, Creswick, Daylesford, Trentham, Upper Barwon River, Anglesea, Yarra Junction, and presumably as far east as the Yallourn-Walhalla-Toomgabbie area (but the very similar tree there not yet thoroughly investigated). In South Australia near Penola and probably at other places in the far south-east.
Type Tree : At 113-mile post on the Great Western Highway, Victoria (between Buangor and Mt. LangiGhiran in Ararat district), and approximately at the centre of the species' range
Futher on Mr. Willis states - the bark has a distinct and strongly aromatic, somewhat camphoraceous to cinnamon-like odour which is

so unusual within the genus that the specific epithet (deliberately shortened from t e Greek "aromatico-phloia") was chosen in allusion to this feature, it is suggested, moreover, that the vernacular name "scent-bark" be adopted for the tree.

Euc nitida

Is the same as Euc simmondsii of Western Victoria

and Euc vitrea of these parts

Information from Jean Galbraith.

fulgens

No common name.

Eucalyptus (aromaphloia) Scent-bark.

1981 Nov 5th. This tree grows in Jeffrey's Bush off Golden Gully Road - quite a stand.
It also grows in Stradbroke area.

1983 ~~A~~ May. Trees flowering - fruits rounded with very slight point or some point. Trees with leaves with bluish colouring. Mullungdung along Harrups Highway. Bark light greyish and trees much branched and straggly. ~~and even several trunks from base~~. Bark rather coarse.

1994 Nov 26. Trees growing in APM block Stradbroke Sth Gipp. H'way.

1997 Nov 15 Growing on Moe Rail Trail.
All E. aromophloia-like trees ~~in~~ east of Melbourne appear to be either E. fulgens or E. ignorabilis as E. aromophloia only grows in Western Victoria according to Flora of Victoria Vol. 3.
We decided our trees were E. fulgens as the bark was furrowed & not tessalated and the fruits were like illustration whereas E. ignorabilis has fruits that rise from the rim . Also leaves were longer too.
In Flora of Victoria there is a special series of Acaciiformes which covers the above 3 species & E. mannifera. But E. fulgens is the only one in this group shown with distribution records for our area. Also see Muelleria Vol 9 1996

2002 Aug 24 Growing in bushland at Newborough near Otleton Avenue.

1996 In Muellera Vol 9 1996 Article on 3 new related species to E. aromophloia sorting out 6 species including E. ignorabilis P. 133

Eucalyptus glaucescens Tinga Ringa Gum

1969 Nov 23rd. Growing near top of Mt. Baw Baw Rd.

1977 Nov 25th Plants growing near car park at Mt. St. Guinear. Bark peals + looks scaly in big pieces. Fruit in threes about size of end of finger. Nuts today were very shiny. Young leaves are real bluish. Mr Dick Reid identified plants.

1983 March 27th Above plants flowering. Juvenile leaves round ♡.

Eucalyptus globoidea. White Stringybark

1983 June 9th Along Anderson's Track past Early Road.
Study Fruit in cluster very tight ball - hence name.
Valves usually enclosed. Juvenile leaves
exceedingly scabrous.

1982 Aug 22 Recorded with Dr. Parsons from Boisdale. S34 However
herbarium said identification was wrong - see letter.

1991 Oct 12 Growing on Mt Heddrick.
1994 Nov 2 " " APM block Stradbroke Sth. Cipp. Hway
1995 Oct 12 " " Mt Heddrick.
2000 Dec 3rd " " Sweetwater Ck. Reserve.
2001 Aug 27th Recorded in Newborough bush.
Dec " " " Sandy Ck.

Eucalyptus globulus. (Blue gum)

1968 Jan 13th Flowering on our property. Flowers in threes. Leaves sickle shaped & dark.

1928 Jan. E. maidenii synonymous with E. globulus subsp. maidenii. J.B. Kirkpatrick Bot. J. of Linn. Soc. 69. 89-104 (1924)
[C. Beauglehole & R. Parsons]

1928 Jan. E. pseudoglobulus synonymous with E. globulus subsp. pseudoglobulus J.B. Kirkpatrick as above.
[C. Beauglehole & R. Parsons]

1928 Jan. E. st johnii synonymous with E. globulus subsp. pseudoglobulus. J.B. Kirkpatrick as above
[C. Beauglehole & R. Parsons]

1997 Apr 5th E globulus ssp bicostata growing in APM Reserve - Grand Rdge Rd. Fruits in threes.

2004 According to Flora of Vic. E. St Johnii is now back again to E. globulus ssp. pseudo globulus which differs from E. globulus ssp bicostata by having a flat stalk to the fruit (however short) while E. globulus ssp bicostata has sessile fruit.

2004 E. globulus ssp. pseudo globulus growing on Colley's Rd. Block.

globulus ssp. pseudoglobulus

Eucalyptus (Stjohnii) Eurabbie

1977 May 20th Growing down at the pump near the creek. Fruits in threes, with 2 main ribs, fruits sessile without main peduncle. Fruits very warty. Buds very glaucose with decided "knob" on operculа.

1978 Jan. Synonymous ~~[illegible]~~, with E. globulus subsp. pseudoglobulus. Kirkpatrick, Bot. J. of Linn. Soc. 69: 89-104 (1974) [C Beauglehole & R. Parsons]

Parsons.

The numerical intraspecific taxonomy of *Eucalyptus globulus* Labill. (Myrtaceae)

J. B. KIRKPATRICK

Reprinted from the
Botanical Journal of the Linnean Society
Vol. 69, No. 2, pp. 89–104
September 1974

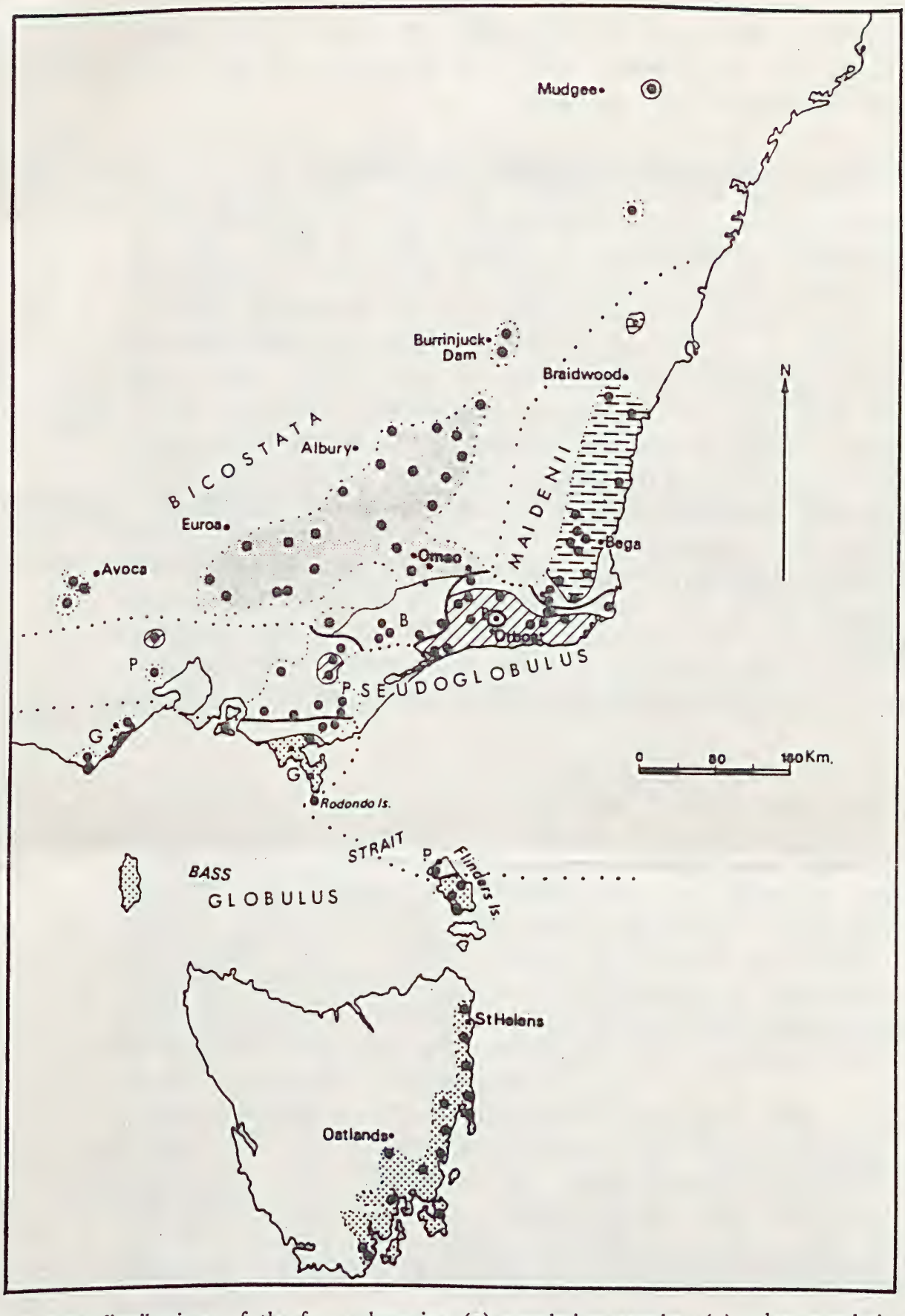

Figure 3. The distributions of the four subspecies: (●) population samples, (•) other populations of known status. The shaded areas include populations that unambiguously belong to one of the four subspecies. The heavy lines divide the ranges of the four subspecies.

in the same taxon as the type population of *E. pseudoglobulus* (11) (Figs 1 and 2). This result of the analysis is supported by geographic variation data (Kirkpatrick, 1973) and by discriminant function analysis. The discriminant function separating the core populations of groups 2 and 3 (*pseudoglobulus* and *bicostata* respectively of Fig. 3) was calculated using the attributes G, D, HD, L, NF, OC, PL, PR, R, and V (see the "Methods" section for explanation of the symbols). Population sample 21 was excluded from group 2. The discriminant scores for population samples in group 3 varied from 1.102 to 1.329, and those for population samples in group 2 varied from 0.723 to 0.951. The discriminant score for population sample 21 was 0.979, placing the population much closer to group 2 than group 3. Thus, as the specific epithet *stjohnii* has priority over the specific epithet *pseudoglobulus,* the names for the four species should be *E. maidenii* (group 1), *E. stjohnii* (group 2), *E. bicostata* (group 3) and *E. globulus* (group 4), rather than *E. maidenii* (group 1), *E. pseudoglobulus* (group 2), *E. stjohnii* (group 3) and *E. globulus* (group 4) as stated by Pryor & Johnson (1971) and Willis (1973).

CONCLUSIONS

The distributions of the four taxa are mapped in Figure 3. Where taxa are connected by clines, the boundaries are, of necessity, somewhat arbitary. However, populations that can readily be placed in one of the four taxa are distinguished as core zones. These core zones are based on a subjective assessment of the difficulty, or otherwise, of placing individuals from populations into a discrete category. Populations, apart from those sampled, are included in the map where sufficient specimens have been seen to make a reasonable judgement on their identity.

The following names are proposed to designate the four subspecies of *E. globulus.* The more important synonyms are included under each subspecies designation. The subspecies are only briefly described by their main distinguishing characteristics. Details on the range of variation in the major characters studied can be found in Table 3. A discussion of the status of all taxa in the subseries *Euglobulares** and *Pluriflorae* (Blakely, 1934) is found in the Appendix.

Eucalyptus globulus Labill., Voy. Rech. La Pérouse, *1:* 153 (1800).

(a) ***Eucalyptus globulus*** Labill. subsp. ***globulus***

The location of the type of the species and subspecies is not known to the author. However, the original description leaves no doubt that the type is referable to this taxon.

The subspecies includes all the Tasmanian populations, all the populations on Bass Strait islands except those on the north of Flinders Island and on Rodondo Island, and a restricted number of populations on the southern extremities of Victoria. The core populations can be distinguished from the core populations of the other three subspecies by their large fruits (generally

* Correctly *Globulares,* according to the International Code of Botanical Nomenclature.

more than 18 mm maximum diameter) and the predominance of single-flowered inflorescences, the latter criterion being the most useful.

(b) ***Eucalyptus globulus*** Labill. subsp. ***bicostata*** (Maiden, Blakely & Simmonds) Kirkpatrick, **stat. nov.**

Eucalyptus bicostata Maiden, Blakely & Simmonds in Simmonds, Trees N.Z. (Eucal.): 133, t. 48 (1927).

The type specimens from the Mundaroo State Forest near Tumburumba have been examined in the National Herbarium in Sydney (NSW) and the type population (B6, Fig. 1) sampled.

This subspecies has the most extensive distribution of the four, being found from southern Victoria to northern N.S.W. However, the core area of its occurrence is virtually confined to the inland slopes of the Great Dividing Range. The core populations are distinguishable from those of *E. globulus* ssp. *maidenii* and *E. globulus* ssp. *globulus* by their three-flowered inflorescences, and are distinguishable in most cases from the core populations of *E. globulus* ssp. *pseudoglobulus* by the size of the fruit (greater than 12 mm maximum diameter). However, other characters such as the number of ribs on the fruit, pedicel and peduncle length (Table 3) need to be considered in combination with fruit diameter before a decision on identity is reached.

(c) ***Eucalyptus globulus*** Labill. subsp. ***pseudoglobulus*** (Naudin ex Maiden) Kirkpatrick, **stat. nov.**

Eucalyptus globulus Labill. var. *stjohnii* R. T. Baker in Vict. Nat., *30:* 127, t. 7 (1913).

Eucalyptus stjohnii (R. T. Baker) R. T. Baker, Hardwoods Aust.: 218 (1919).

Eucalyptus pseudoglobulus Naudin ex Maiden, Crit. Rev. Eucal., *8:* 28 (1929).

The combination *Eucalyptus pseudoglobulus* was proposed by Naudin in 1890, but awaited formal description by Maiden until 1929. No type specimen was designated by Maiden, so it is necessary to choose a lectotype. King's specimen from Metung, dated 23/8/1909 and held at the National Herbarium in Sydney (NSW), had been suggested as the lectotype for *E. pseudoglobulus* by Dr L. A. S. Johnson (pers. comm.) and is equally suitable as the lectotype for *E. globulus* ssp. *pseudoglobulus.*

This subspecies is found mainly in East Gippsland, although it occurs sporadically between Metung and the Lerderderg Gorge. Populations of this taxon with larger than normal fruits are found around the mouths of streams in the vicinity of Mallacoota.

The core populations of this subspecies are distinguishable from those of *E. globulus* ssp. *maidenii* and *E. globulus* ssp. *globulus* by their predominantly three-flowered inflorescences. The features that distinguish *E. globulus* ssp. *pseudoglobulus* from *E. globulus* ssp. *bicostata* are described briefly above.

(d) ***Eucalyptus globulus*** Labill. subsp. ***maidenii*** (F. Muell.) Kirkpatrick, **stat. nov.**

Eucalyptus maidenii F. Muell. in Proc. Linn. Soc. N.S.W., ser. 2, *4:* 1020, tt. 28, 29 (1890).

The type specimens of *E. maidenii* have been examined in the National Herbarium of N.S.W. One of the type specimens collected by Bauerlen between Candelo and Colombo in south coastal N.S.W. has atypically smooth buds whose shape suggests possible hybridization with *E. tereticornis* Sm. The other type specimens are representative of the taxon.

This subspecies is almost entirely restricted to the south coastal region of N.S.W., although two populations were located just over the Victorian border in East Gippsland.

The core populations of this taxon are easily distinguished from the core populations of the other three taxa by their predominantly seven-flowered inflorescences.

ACKNOWLEDGEMENTS

I gratefully acknowledge help provided in this study by Dr R. F. Parsons, Dr T. Whiffin, Dr L. A. S. Johnson, the Forestry and Timber Bureau, and the Geography Departments of the Universities of Melbourne and Tasmania.

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Eucalyptus goniocalyx long-leafed Box.

1991 Sept. 1 Plants growing in the Grampians.
Seed cups closely packed with ridges vertically.

1991 Oct. 12 Plants growing on Mt Heddrick.

Eucalyptus ignorabilis Green Scent. bark

2001 Oct 21 Beginning to flower in Newborough bush.
Discussion on the separation of the old species
E. caramephloia complex is written up under
E. fulgens in this book. As Newborough is
to the left of Traralgon Tip in the top of Tip
I think it may be recorded there in Flora of Vic.
The fruit exactly fitted the description in the book.
Dec 1 Recorded in Sandy Ck Bush, Newborough.

Eucalyptus Kitsoniana Gippsland Mallee or Bog Gum.

1980 March 29. Plant growing Brown land below Middle Tarwin Sand Pits. Mallee type tree with buds in 7s on flattened stalks. Buds have ~~t~~ no stems individually. Bark smooth in texture Ill. in Honey Flora of Victoria.

Eucalyptus kybeanensis Ash-mallee

1994 Nov 9th Recorded on Nicola weekend.

Eucalyptus leucoxylon Yellow Gum
(Wood Yellowish)

Bark - at base coarse loose fibrous with most of trunk or stems smooth yellowish
Leaves ovate to broadly lanceolate to 2-20cm long & 2-3.5cm wide blue green. concolorous.
Intermarginal vein remove from edge. reticulation moderate to dense, often obscure, with numerous, island & intersectional oil glands.
Inflorescence axillary, unbranched, peduncles to 1.1 cm long, 3 flowered, buds pedicellate ovoid or globular to 1.5cm long x 0.8cm diam, no scar (2 opercular intact) operculum conical or beaked. stamens inflexed with outer staminodes.
Fruit pedicelate, truncate - globse. staminal ring broad, deciduous, disc descending, valves 4-6 below rim.
Subsp. megalocarpa Fruit more than 1.2 cm long & 1.1 cm diam. leaves usually more than 2.5cm wide.

This variable species has 4 recognized subspecies which the Flora of NSW says needs revision.
Flora of Victoria has 4 subspecies from mostly Western Victoria. Three of these subspecies were previously varieties & the 4th is because one variety was further split.
Wax present at least on juvenile leaves & usually buds.
Fruit more than 1.2cm & leaves more than 2.5 wide
Then Fruit less than 1.2 cm & leaves usually less than 2.5cm wide.
Pedicel equal to or longer than fruit; pellicle (thin skin) rarely persisting across orifice of mature fruit.
Pedicel c half length of fruit, pellicle persisting on mature fruit.
Costermans states cultivated var. rosea is attractive & popular.

P.T.O.

1998

In Muelleria 11 1998 R Rule records new subsp of *E. leucoxylon* with distribution near Ocean Grove + Lake Connewarre > Also gives key to all subspecies.

1991

In Muelleria 7/3 Apr 1991 Rule has key to taxa of *E. leucoxylon* with 6 ssp.

lyptophylla

Eucalytus (foecunda)

1972 Aug 28 Growing in Little Desert

Eucalyptus. macrorhyncha. Red Stringybark

1991 Oct 12 Growing on Mt Hedderick.

Eucalyptus maculata — Battle Cum.

1994 16th Aug — Recorded on Nicola weekend.

1997 Jan 15th — " at Livingstone Ck near Ameo.

Eucalyptus melliodora Yellow Box

1994 Oct 30 Plants growing in Dawson Water Reserve

" " " " " River "

2002 Nov 30th " " Toongabbie Wetlands

Eucalyptus mitchelliana Buffalo Sallee.

1990 Jan 4. Tree growing near old tennis court at Chalet at Mt Buffalo. Identified by Laura White.
Trees growing below bridge to Lake Catani.
Leaves narrow, shining. fruits sessile, clustered ± globular.
Trees spreading - relatively small.

Eucalyptus muelleriana Yellow Stringybark.

1970 Oct 19th Flowering at Briagalong.
Study :- Valves barely exserted or level with rim. Fruits bigger than E globoidea although E. globoidea is stated as 7mm & E. muellerana > 7mm.

1989 May 11th Plants growing on Blackwarry Scenic Road. Also growing in Boodyarn.

1994 March 21st Plants growing on Henderson's Rd, Traingabbie. Ollie not completely happy with identification as growth habit of trees are not straight & tall but rather spreading with even drooping lower branches & trees not tall. Bark also had a reddish appearance.

2004 Apr 3. Growing on Colley's Rd. Block
2006 Nov 4th " " Springsure area

Eucalyptus neglecta Oneo Cum

1997 Jan 18th Trees growing along Livingstone Ck near Oneo. Juvenile + intermediate leaves ± glaucous giving the trees a greyish purple look which stands out from the surrounding greens. Stems are distinctly 4-angled, leaves highly aromatic. Buds very small ± 4mm long + fruits to 5mm wide + very compact. Bark subfibrous, flaking in small tessellated fragments. Willis says young inflorescence covered by a common "operculum" (formed of coherent bracts, deciduous as a whole). Unfortunately we didn't see this.

E. cadyplus nitens Shining Gum

1993 Jan 31. Trees growing in Hensleigh Ck Rd. did not look exactly like the *E. nitens* we are used to at Mt St Gwinear. The leaves appeared smaller and more bluish. Letter from Evan Chesterfield states '*Euc. nitens*' on the Errinundra Plateau has recently been described as *E. denticulata*. So perhaps these trees were *E. denticulata* — haven't description of this species yet.

1993 Jan 31 Trees growing as stated above.

Eucalyptus obliqua — Messmate

1969 Oct 18th Flowering at Rosedale.
1971 Oct 23rd " in Morwell Nat. Park.
1994 Oct 28 Plant growing in Tyon Sth Reserve.
1995 Apr 12th " " " Drouin Water Reserve.
1997 Apr 5th " " " APM Reserve – Grand Ridge Road.
These plants what Allie calls mountain messmate because of the rough sock.
2000 Dec 3rd Plants growing in Sweetwater Ck. Reserve.
2001 Aug 27th " " " Newborough bush
Dec 1 " " " " Sandy Ck
2004 Apr 3 " " " Coffey's Rd. Block

Eucalyptus ovata (Swamp)

1969 Feb. 23rd Flowering our bush
1970 Sept 26th " among the pines at hongford.
1981 Nov 5th Trees growing at corner of Dean's Road and Driffield Rd have exceptionally broad leaves to almost round and fruit larger than is common in this area.
Also a stand of E. ovata in Jeffrey's bush off Golden Gully Road are the tallest and straightest specimen's that Geoff Carr has seen. Specimens at Hessian's Gully growing with Mountain Grey Gums are also very unusual straight fine trees.
1993 Jan 30 Trees growing in Errinundra N.P. Tall variety of this species.
1994 Nov 26 Trees growing in APM block Stradbroke Sth Gipp. H'way.
1995 Apr 12th " " " Drouin Water Reserve.
2001 Aug 27 " " " Newborough bush.
1992 Key to Swamp Gum series in Muelleria Vol 4 P 497.

Eucalyptus pauciflora Snow Gum

1971 Jan 17 Trees growing at Mt Useful. Appeared to be two types of trees in the area. However the specimens I brought home was definitely Snow Gum because of the vein construction + seeds. One type of tree had broader leaves + more erect habit. The other type which I brought home were of more drooping habit + leaves narrower.

Jan 30. Plants growing on Howitt Springs.

1972 Feb " " at Mt. St. Gwinear.

1981. Nov 5th Trees growing along old Midland Highway at corner of Applegates Road. This is a clump of trees. We also found a single specimen on Nadenbouches Road behind the singlemen's hut.

1994 Sept 9th There are now 5 subspecies of E. pauciflora mainly restricted to specific areas.

1995 ~~Nov 9~~ Jan 15th Recorded for Dargo weekend.

1996 Jan 20th " " Hotham weekend.

Sept 5th Growing on Significant Roadside Area on Tramway Road near Churchill.

1997 Jan 18th Growing along Livingstone Ck near Omeo.

1991 Jan 28th " on Gelantipy weekend. on Bogong Road. Think this ssp was ssp. pauciflora

1999 Jan 23rd " " " " " . Growing on Gelantipy weekend. Identified from specimens brought back.

In Flora of Victoria it states only subspecies on Baw Baw + Mt Useful is subsp. acerina Vol 3 P. 1007.

1994 In Muelleria Vol 8/2 March 1994 Key to Snow Gums

	absence of observable surface wax Eucalyptus pauciflora ssp Acerina	sessile nature of buds & fruits ssp hedraia	small fruit in relation to typical form. ssp parvifructa.
bark	smooth brown ribbons	smooth grey brown ribbons	Smooth
J. leaves	petiolate alternate dull blue-green or grey green to 10 x 4 cm	petiolate dull grey-green 12 x 5 cm	petiolate alternate dull grey-green 11 x 3 cm
Petioles	1.2 cm long.	to 1.5 cm.	to 10 mm.
venation	sub-parallel	sub-parallel	sub parallel
nodes	moderately crowded	mod crowded or crowded	mod crowded
Adult Leaves	lustrous green conspic. glandular to 10 x 3 cm	dull or semi lustrous glandular to 13 x 4 cm	lustrous green glandular 10 x 2 cm
Petioles	non-waxy to 2 cm.	waxy slightly angular to 2 cm	lightly waxy. slightly angular to 15 mm.
Inflorescences	7-9 flowered	7-11 flowered	7 rarely 9.
Peduncles	terete 3-6 mm long.	slightly angled to 7 mm long.	flattened to 8 mm.
Buds opercular	clavate or pedicelate waxy burnished to 8 x 4 mm. hemispherical	ovoid, sessile waxy, warty 8 x 7 mm. conical or hemispherical	clavate, subsessile. lightly warty 9 x 3.5 mm. conical or hemispherical
Fruit	hemispherical subsessile to sessile 4-5 (6) x 5-7 (8) mm disc level with rim	ditto sessile. waxy 7-10 x 10-14 (15) mm level with rim peduncle 2-4 m long	ditto. sessile or subsessile 5-8 x 6-8 mm disc level with rim
Seeds	Black to 2 mm long	to 3 mm long	to 2.5 mm.

Eucalyptus perriniana Dargo Gum

1972 Jan 30th Growing at Mt Howitt.

Eucalyptus polyanthemos Red-box

1968 Sept 3rd Flowering at Cowwarr.
1969 Nov 2nd " " Briagalong.
1992 July 29th Mr Cheberlonie explained how the mature leaves of these trees have an indentation or dimple at the apex. Very broad almost circular leaves

1994 Oct 30 Growing in Dawson Water Reserve.
" " " " Rwey "
1995 Oct 28 " " Mt Heddrick

Eucalyptus Radiata (Peppermint)

1967 Jan 1st Flowering along Clark's Rd.
1968 ~~Nov~~ Jan 14th " " Track
1977 Nov 26th Trees growing along track to Iron Bridge on Thomson River Road. These trees were identified by Dick Reid who said they were Euc. robertsonii. Mr Willis says these trees do not warrant species rank. See his book.
1979 Sept 10th Recorded with Dr. Parsons – buds & fruits for X
1994 Nov 26th " in APM block Stradbroke Sth. Gipp. Hiwey.
Dec 28 " " Tgon Sth Reserve.
Oct 30 " " Dawson Water Reserve.
1995 Apr 12th " " Drouin " "
Jan 15th " " Dargo weekend.
1996 Jan 20th " " Hotham "
1995 Nov 12th " " Railwey Reserve near Traralgon.
1997 Apr 5th Growing in APM Reserve – Grand Ridge Road.
2000 Dec 3rd " " Sweetwater Ck. Reserve.
2001 Aug 27th " " Newborough bush.
Dec 1 " " " Sandy Ck.
1999 In Muelleria Vol 12 (2) 1999 P. 165 there is key to Victorian Peppermints by K. Rule. Also description of new species from Little Desert N.P.
2004 Apr 3 Growing on Colley's Rd Block
2006 Nov 11th " " Springare area.

Eucalyptus regnans Mountain Ash

Fancy not having any records of this species.
Perhaps familiarity breeds contempt or just forgetfulness.
We have it all around Central Gippsland.

1993 Jan 3rd Trees growing in Errinundra N.P.
1991 Jan 25th " " on Betts Track on Gelantipy Weekend.
1999 " 23rd " " " Gelantipy weekend.

Eucalyptus robusta Swamp Mahogany.

1989 Feb 24th An area of these trees at different stages of growth which indicates they have become naturalised in the area. Area is West Gully (east of Howletts Road) in Yallourn area. Rang Ian McDonald as thought he may have information on how they came to be there. In 1934 Savages planted both Southern & Swamp Mahogany Gums on the North slopes of the original Yallourn overburden dump. In 1956-60 Swamp Mahogany Gums were planted on eastern side of high dump towards Andersons Creek. About 1956 S.E.C. were worried about soil slipping into the gully and they used garden soil + brush fencing to prevent it. Material for brush fencing came from trees on original Yallourn overburden dump as there was plenty of treetrees, wattles + eucalypts (Black & Sydney Green) suitable on that site. So hence the Swamp Mahogany in the swamp area of West Gully.

Eucalyptus rubida Candlebark.

1981 Nov. 5th Trees growing singly on the Morwell River flats. Red patches on trunk conspicuous at this time of year.

1994 Nov 9th Recorded for Heyfield weekend

1995 Jan 15th " " Dargo "

This species is also plentiful at Tambarittha

1996 Jan 20th Recorded for Hotham weekend.

Sept 5th " for Significant Roadside Area on Tramway Road near roundabout at Churchill

Dec Growing on Old Melb. Rd near Latrobe Rd, Morwell.

1997 Jan 18th Growing along Livingstone Ck near Omeo.

1997 Jan 28th " on the Glenaladale weekend.

on way home from Rocky Plain

2003 Mch Recorded in Eel Hole Ck/Cemetery Conservation Reserve Management Plan.

Eucalyptus saxatilis Suggan Buggan Mallee

1999 Jan 23rd-4th Identified by James Turner on Cielantipay weekend.

Eucalyptus. sieberi Silver Top.

1970 Oct 17th Flowering at Briagalong
1973 May 7th Plant growing near Cormandale School.
1993 Jan 31 One of my favorite species of eucalypt. So I was pleased to see it in the Errinundra N.P.
1995 Jan 15th Recorded on Dargo weekend.
" Oct 25 " " Mt Heddrick.
1996 Jan 20th " " Hotham Weekend.

Eucalyptus sideroxylon Red Ironbark

1969 July 20th Flowering at Glengarry North. Flowers yellowish pink with deep pink sticky tip. Flowers on long stalks — two groups of stamens, one set as long as sticky tip, other set much closer together & very short. Bark black with deep furrows. Trees not very heavily branched, very tall & in profuse flowers. Parrots were eating the flowers. Lots of honeyeaters also in the vicinity.

Eucalyptus smithii

Gully Gum

1999 Jan 23rd-24th Identified by James Turner on Gelantipay weekend.

Eucalyptus stellulata Black Sallee

1970 Jan 24th Flowering on Rocky Plains, Wulgulmerang.
1971 Jan 30th " on Howitt Plains area.
1972 - " " " " "
1996 " 20th " " Hotham weekend.
1997 " 18th Circuiring along Livingstone Ck near Omeo.
1991 " 28th " near Rocky Pain area on Gelantipay weekend.
1999 " 23rd Identified by James Turner on Gelantipay weekend.

Eucalyptus strzeleckii

1994 June 20th Collected flowers, fruits + buds from tree down near the creek on our property. Sent specimens to Dr Parsons 25.8.94 as he wanted them. This extended the range from that reported in Muellenia from Foster to Mirboo Nth. Andrew Paget reports it growing along the Tarwin River.

1996 Aug 31st Tindivick land-care area.

2003 Mch. Recorded in Eel Hole Ck/Cemetery Conservation Reserve Management Plan.

1992 In Muellenia Vol 7/4 Apr. 1992 Description, diagrams + key to E. strzeleckii Key to Swamp Gum species P. 497

Eucalyptus. tereticornis Forest Red Gum

1970 Nov 25 Growing around Briagalong.
1971 Aug 22 " " in Lakes National Park - Loch Sport.
1994 Oct 30 " " Dawson Water Reserve.
" " " " R'way "
2004 Mch 13. John Topp brought specimens to sort out between E. camaldulensis, E. tereticornis & E. blakelyi. The differences that were distinctive were the buds. E camaldulensis had beaked buds ⌀, E tereticornis has spindle buds ◁, while E. blakelyi has hemispherical base with cone top ⌀. Of course there are other differences in size of leaves and venation.

Eucalyptus viminalis Manna Gum.

Around Traralgon South there are few true E viminalis except along the creek. Most of the trees are E. pryoriana the rough-barked Manna Gum.

Up the Traralgon Creek Road to LeRoy there are some beautiful stands which are beautiful when they are losing the old bark & revealing the lovely pinkish-orange bark beneath.

1993 Jan 31. Trees growing in Errinundra N.P.
1994 Nov 26 " " " APM block Stradbroke Sth. Gipps Way
Oct 28 " " " T'gon Sth. Reserve
Oct 30 " " " Dawson Water Reserve.
1995 Nov 12 " " " Railway Reserve near Traralgon.

viminalis ssp pryoriana.

Eucalyptus pryoriana.

1992 Apr 25. Plants growing in Noarnorang Coastal Reserve near Port Albert. Fruits in 3s and rough bark at least to lower branches.

1996 Nov 23rd Ditto.

Dec Growing on Old Melb Rd near Latrobe Rd. Morwell.

1998 Muelleria Vol 9 1996. This species has now been decided to be Eucalyptus viminalis ssp. pryoriana. Also that now in Flora of Victoria Vol. 3 and 5th Edition of Census.

Eucalyptus viridis Green Mallee

1972 Aug 28th Plant growing in Little Desert
leaves only 1½" long with bent pointed tip.
Fruit small smooth petiolate.
Buds 4-80 flowers.
leaves petiolate
Plant identified by Mr Lindner.

willisii

Eucalyptus (nitida) Leafy Peppermint

1969 Nov 15th Flowering in Rosedale area
1970 Sept 14 " " at Dutsun Road Area.
This plant was thought to be only in Tasmania but has turned up along Victorian Coastline at Wilson's Prom., Dutsun & Providence Ponds.
Information supplied by Miss Galbraith.
1981 Oct 24th Flowering on Lime Pit Road - Rosedale.
1983 May. Mullungdung - Harrups Highway. Tree with weeping habit as leaves all hang down almost vertically with very few leaves at other angles. Red disc to fruit which has wide rim. Veins on leaves widely spaced and angle of vein acute (app. 30°) Upper branches smooth and paler. Bark persistant at base. Several trunks from ground level. Leaves appear longer than Eradiata but this could be because of angle leaves hang.
1999 In Muelleria Vol 12(2)/1999 Key to Vic Peppermints by K Rule P165

Eucalyptus (willisii nitida) Smithton Peppermint.

1996 Nov 7" Rifle Range at Giffard

Eucalyptus yarraensis

1981 Nov 5th Trees growing on Morwell River flats but will be destrayed by S.E.E.C. Driffield project. Trees also grow on old railway line just opposite the elderly citizens building. Also these trees grow on the Gormandale Rd on Sheepwash Creek and the Rosedale Shire have agreed to protect a clump of these trees on the Glengarry/Tyers Rd. On Silcox Road at Hazelwood a tree is growing on the top of the hill. (Is this unusual or not?)

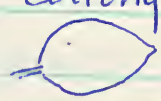
1959 In Muelleria Vol 2/1, Apr 1959 table which separates this species from E. cadens; E. aggregata and E. camphora

Euchiton argentifolius

(Gnaphalium ~~traversii~~ argentifolium) Mat Cudweed

1971 Jan 30th Plant in bud but no flowers seen, at Howitt Plains. Small, under 1", white basal leaves also white underneath. Flower stalks pure white with few tiny stem leaves. Flower appears to be solitary, not in a cluster. Flower stalk 4" long bud brown, could be wet.

1972 Jan 30th Flowering at Howitt Plains. Basal leaves long wide, stems ¼", leaves white cottony beneath 1" long, quite a number. Stems 3"+ long with small flowers with 2 floral bracts behind > ½" & a few small leaves very narrow up stem. Flower golden with dry appearance, approx 6.

There was also a small form of an introduced species. Basal leaves much broader than above. Leaf stem up to 1" app. White cottony beneath & green ~~colour~~ cottony above.  Flower stem 6" long with 2 broad floral bracts at top with app. 9 flowers. Floral bracts very rounded at tip. Flower stems quite white with leaves app. ½" long up stem. & small clusters of 2 or 3 flowers on one stem at leaf bract base. Whole plant more spreading & flat than argentifolium.

1978 Jan Also recognized species G. fordianum M. Gray, Contr. Herb. Aust. No 26: 2(1976) [C. Beauglehole & R. Parsons]

1999 In Muelleria Vol 12 (4) 1990 new species resembling two above species from Baw Baw is described. P.T.O.

There is key to similar species P. 229. New species is E. polyochlorus.

Euchiton (gymnocephalus) Collinus

(Cinaphalium japonicum) Creeping Cudweed.

1970 Mch 28th Plant Growing along Chessum Rd. Small plant about 9" high to 1ft. leaves & bracts narrow & whitish headlets close to stem & whitish too but those may have dried. (Not sure of this identification).

1972 Jan 30th Flowering at Mt Hawlt.

1978 Jan. Synonymous with G. gymnocephalum. Drury N.Z. J. Bot. 10: 112-179 (1972) [C. Beauglehole & R. Parsons]

1982. Jan 12th. Flowering at Swamp at Yallourn turnoff near pump house. Tall plant about 2ft high. Typical graphaliuim-like flowers. leaves whitish underneath. Plant very erect and leaves quite stiff and erect., dark green above and pointed - about 8-10" long.
Dr. Ross at Herbarium identified this plant and said it was just a robust form.

1994 Nov 26th Plant growing in APM block Strzelbroke Sth Cipp. Hway.
Oct 28th " " in T'gon Sth Reserve. flowering.
Oct 30 " " " Dawson Water Reserve
2002 Oct 26 " " " T'gon Sth Flora & Fauna Reserve.
2003 June Name change in 7th ed. of Census

Euchiton involucratus

(Cinaphalium Involucratum)

Star (Cudweed)

1967 Jan. 2nd Flowering in our bush. - Densely clustered small headlets. looks like rough daisy.

1975 Jan. Plus extra species C. sphaericum Druny. N.Z. J. Bot. 10. 112-179 (1972) [C. Beauglehole, R. Parsons]

1994 May 1. Growing in Austen's property near Parlamurla.

1996 Nov 23rd " " Old Port Trail in Nooramunga Coastal Park.

" Dec " " Railway Reservoir Conservation Reserve, Traralgon.

1997 Sept 6th " " on Moe Rail Trail

2010 Nov 3 " " in Newborough Bush

" Dec 1 " " " Sandy Ck.

Euchiton nitidulus

(Cinaphalium nitidulum). Shining Cudweed.

1992 Jan 26th Growing near Cape Hut track on main road in Bogong High Plains. Recorded in Willis as rare at Pretty Valley. Not really sure of identification. So small I though it may be Edelweiss until I saw transparent bracts. Plants very low, leaves crowded in a roselle fashion for each group. Leaves certainly overlapping; plant about ½" - ¾" high. Flowers in centre of leaves with only 1 single head with long floral bracts golden & almost transparent. Leaves with parallel margins & apex and stalk almost as wide as the leaf but not quite. Hairs on leaves appressed & shiny but I cannot see that they are yellowish under hand lens. Peduncle about length of leaf which is ± 4 mm. Flower-head solitary surrounded by rosette of leaves although leaves are just surrounding peduncle but not attached to it. Inner bracts of flower quite long ± 7 mm ~~but~~ and ═ shape, second row half the length but the same shape but the third row about half length of second row but very broad shape ○. Lovely tiny plants.

Gnaphaliums

G. candidissima X 4-mile creek.
G. leucoalbum X " " " no floral bracts.
G purpurea X " " " green leaves above.

Check G. sphaericum - like involucratum but big plant & 2 floral leaves

Leaves 3 cm long including stem 1 cm wide & toothed. White both sides
Flowers interrupted spike with 2 floral leaves at each head of ~~app.~~ 9 flowers All heads terminal on side branchlets & one at end of main stalk with more head & very short floral leaves Bracts brownish & paperish.
Plant 14 ins high
Sept. 24" flowering.

Cyriophyllum amphibium

Stop

Euchiton sphaericus or Annual Cudweed.

1996 Oct 5th Growing & flowering at Paradise Beach at 2nd pipeline in N.P.
Notes say this plant is like E. involucratus but big plant with 2 floral leaves.

1997 Sept 6. Growing on Moe Rail Trail.

2001 Dec " " Sandy Ck. Bush, Newborough.

Euchiton umbricolus

(Cinaphalium umbricola)

1972 Jan 30th Flowering at Mt Hewitt.

1990 Jan 4th Plant growing at Mt. Buffalo. Leaves long petiolate, elliptic to obovate. Heads usually > 7 in compact cluster - 2-3 floral leaves. Plant tufted + stoloniferous. Growing on rock faces. Plants flowering.

Pinkwood on
Eucryphia moorei. Mainland heatherwood

1984 Oct. Plant growing in Howe Ranges area on Gipsy Point trip. heaves large + pinnate.

Euphrasia Collina Eyebright:

1970 Jan 2nd Flowering at Tamboritha Saddle.
15th " at the Cobberas.

Other sightings of this plant under heading of E scabra.

Oct 18th Flowering at Briagalong.

1971 Jan 17th " . Mt Useful. I have never seen this plant growing in such profusion as here. It was the best time of the year apparently as there were few spent flowers. The flowers were growing in thick clumps of about 20 flowering stalks and with the wild violets made a beautiful display. They were a deep colour & fairly large flowers.

Jan 30th Flowering at Howitt Springs and on Mt Howitt Hike. Variable plant with opp leaves with about 3 or 4 lobes on each side and veins very prominent on the underside. One specimen with leaves little more than ¼" and about ⅛" wide but other specimen with leaves ½" long at least and very broad with 3 or 4 lobes on each side some appearing almost circular. Flowers large.

Aug. 30th Flowering on Rose Gap road in the Grampians.

1972 Feb. Flowering at Mt St. Gwinear

1974 Dec 7th " . Tamboritha - Bennison Plains. Beautiful blue everywhere.

1985 Nov 2nd Flowering on trip to Tamboritha. Identified by J. Galbraith.

1994 Jan 16th On Mt. St. Gwinear.
1997 Jan 17th " Mt. Baldhead.
2003 June

Euphrasia gibbsiae

1973 Jan 26th Flowering at Mt Baw Baw.

1985 Nov 2nd " on trip to Tamboritha, think it was near Carey's lookout. Identified by J. Galbraith

2003 June In 3rd ed. of Genus there are E. gibbsiae subsp. subglabrifolia & E. gibbsiae in Willis is now E. lasianthera

Euphrasia scabra — Eyebright.

1968 Jan 18th Flowering at Baw Baw. Would say it had been flowering some time, lots of seed stalks. Mint-like flower two top petals + three bottom petals. We saw up to 6 flowers around top of rough sticky stem. Flowers white.

1969 Oct 12th Flowering at Beaconsfield Upper. Very delicate flower. Three lobed leaves (finely lobed) opposite, red stem, mauve + white flowers stemless.

Euphrasia scabra is a yellow flowered eyebright so the above two specimens must have been E. collina.

Euryomyrtus ramosissima

(Baeckea ramosissima) Rosy Heath-myrtle.

1969 Aug 16th Flowering at Wilson's Prom. Trailing plant with erect branches. leaves ling about ¼". Flowers with 5 separate petals, flower about ⅓" across. Stem reddish. Flowers very pale pink to white. Flowers on short stalk with tiny leaves on it. leaves opp.

Sept 4th Still flowering at the Prom.

Oct 12th Flowering along Tynong North Road. This variety is a lovely bright pink type.

1970 Jan 1st Flowering at Tambaritha Saddle.

1971 Jan 30 " at Howitt Springs + on Mt Howitt Hike.

Aug 28th Flowering in Wildflower Sanctuary at Stawell. You would not think this the same as the plants above. The flowers were as big as 1cm tree and a lovely deep rosy pink. Is this where it got its common name? Not only are flowers bigger but plants are bushes about 2ft high - not a prostrate bush. Truly beautiful.

2003 June Name change in 4th ed. Census

2005 Jan 24 Specimen brought back from Errinundra weekend. This specimen was erect with erect flowers so was var ramosissima.

Eustrephus latifolius — Wombat Berry

1972 July 9th Plant growing at Billy Goat Bend. Has orange berries with black seeds. Leaves stalkless, shiny with longitudinal veins. Berries from leaf bases on long stems. Leaves in pairs. Many berries from one leaf base ~~on long stems~~.

July 22nd Plant growing in Fairy Dell.

1993 Jan 31 Errinundra area.

Eutaxia microphylla

1972 Aug 28th Plant growing in Little Desert.
leave very tiny about 4-7 mm long & about 1mm wide, pointing upwards, opposite, ~~alt~~ decussate.
Flowers at leaf bases 1 or 2. Pods oval opening at the end. Branches small, ending in sharp spines.

1973 Sept 3 Plant growing in the Whipstick - Bendigo.

Ewartia nubigena. Brown Edelweiss

1994 Jan Plants with just a very few flowers. Dainty little mat. plant. Whitish, leaves form rosettes that look almost like flowers.

1992 Jan 26th Plants growing ~~beside~~ road up to Mt McKay on Bogong High Plains.

1996 Jan 20th Plants growing on Mt Loch - Hotham weekend.

Exocarpus Cupressiformis (Cherry Ballart)

Jan 2nd Flowering in bush above house. Fruits stalks red with green fruit.

July Flowers on bush. looked at them under 125× magnification Male & female flowers back to back. One dark maroon the other green. Think perhaps maroon are female but not sure. Ollie suggests tree has flowers over very long period. No flowers on E. stricta. Could both flowers be close together so that pollen drops from male to female.

Aug 13th Still flowering in bush opp. O. Wade's

Oct 1 Seed formed but not mature in T'gon Sth Reserve

1961 Jan 16th Flowers in bud. When viewing under microscope a very very small caterpillar (?) walking amongst the bud. Appeared to loop along, no color just clear.

Feb 16th Flowering Rosedale

1970 Aug 21st Flowering along road in Driffield area. Flowers 5 petals with ~~inferior~~ superior ovary ie, inside the flower. Flowers on this specimen unisexual.

Sept 13th Plants with few flowers but also some green 'cherries' opp. O Wades.

Nov 25 Growing at Briagalong.

1971 Sept 19th Flowers on plants in Traralgon South Reserve and some fruit formed.

1982 Sept 23rd Some trees with a few flowers still blooming but many fruit formed, all green yet. Did find one fruit orange colour.

1999 ~~Sept~~ Oct 10th Recorded with D. Parsons for X flowers, fruit.

1994 Oct 28th Growing in T'gon Sth Reserve.

Oct 30 " " Dawson Water Reserve

" " " R'wey "

1994	Nov 9th	Growing at Hicola area
1995	Jan 15th	Recorded for Dargo weekend.
	Oct 25	" " Mt Heddrick.
1996	Jan 20th	" " Hotham Weekend.
1997	" 18	" " Mt. Baldhead.
2001	Aug 27th	" " Newtarough bush
	Dec 1	" " " Sandy Ck.
2002	Nov 9th	After the burn at Crinigan Road – a slow burn which nevertheless burnt all the small branches off the tree; the tree was shooting again along the large branches so that it looked like a eucalypt with its epicormic shoots.
2004	Apr 3	Growing on Colley's Rd. Block.

Exocarpus nanus

1970 Jan 24th Plants with berries on them on rocky plains + on the Cobberas at Wulgulmerang. Tiny plants only 1" high with berries 5mm long. The berries were a very bright red and the seed greenish yellow. The plant is creeping, stem is flattish, triangular jointed. At each joint is one or two stipule-like "leaves"

Jan 25th Plants found on the Cobberas ~~with~~

1971 Jan 30th Plants found on plains at Howitt Springs. Plants had many cherries.

1995 Jan 15th Recorded for Dargo weekend.

1996 Jan 20th " " Hotham "

Exocarpos sparteus

1972 Sept. Plant growing near Mt Zero.
Plants brownish rather than green.
Towards the ends of branches there
are definite little lanceolate leaves about
·5 cm long. Flowers are in spikes on
quite long ~~sta~~ main stalk. Branches
angular + ribbed. No fruit on plants yet.

1994 Nov 9th Recorded for Licola weekend.

Exocarpos Syrticola

1969 May 24th Plants growing at Cape Paterson. Shrub of the coastal areas. Stiff branches not drooping rather erect. Much branched. Branches more triangular than round with protruberance at each joint

Whole more flatish than the Cherry Ballart.

1970 Mch 8th Plants growing at Sandy Point near Walkerville. Ends of branches reddish

1978 Sept 23rd Plants growing in heathlands near Bear Gully (Cape Liptrap)

Mine

RED FLOWERS

Clover-like leaves, wavy edges. Flower scarlet (stamens 9 & 1)
Creeper — Running Postman (Kennedya)

PURPLE & BLUE FLOWERS

A. Slender shrubs
B. True pea flowers. Pinnate leaves. Hairs on calyx & pod. (stamens 9 & 1) — Indigo (Indigofera)

B. Not true pea flowers. Entire lanceolate leaves. No standard. Flowers pinkish blue. — Pyramid Bush (Comesperma)

A. Creepers.
C. True pea flowers
D. Entire dark leaves. Tough stems. Flowers in racemes. (stamens free) — Purple Coral Pea (Hardenbergia.)

D. Leaflets three. Weak twiner. (stamens united in tube) — Glycine (Glycine)

C. Not true pea flowers. Practically no leaves. No standard. — Love Creeper (Comesperma)

A. Small plants. Leaves entire oval to lanceolate. Flowers in clusters at leaf bases. (stamens united) True pea flowers. — Hovea (Hovea)

YELLOW FLOWERS

A. Leaves three narrow leaflets joined at base. (stamens free) dark blue buds. — Wedge Pea (Gompholobium)

A. Leaves three clover-like leaflets with tiny stems. (stamens united) in tube open on upper side. — Golden Tip (Goodia)

YELLOW & BROWN FLOWERS

A. Stamens free.
B. With stipules (small, black, broad at base). Standard longer than wings. Leaves alternate. — Bush Peas (Pultenae)

B. Without stipules.

C. Leaves narrow, alternate.
D. Curved upwards giving channelled effect on the upper surface. Standard broader than long, Kidney shaped. Pod Inflated. — Parrot Peas (Dillwynia)
D. Curved under giving channelled effect on the under surface. Standard not broader than long. Bonnet-shaped. Pod inflated. — Aotus (Aotus)

c. Leaves large, alternate and bitter. Standard as long as wings. Pods triangular. — Bitter Peas (Daviesia)

A. Stamens united.
E. With stipules (thin and hairlike). Stamens united in tube (9) and 1 free. Leaves small. Standard almost circular, as long as wings. Pods Flat. — Bossiaea (Bossiaea)

E. With stipules (bract-like). Stamens united in lower half like a hand. Leaves very stiff, opposite and large. Standard longer than wings. Calyx very hairy. Pods flat. — Flat Peas (Platylobium)

Kennydia	Lewis Kennedy 1775–1818 – nurseryman. 15 species all Australian.
Comesperma	Koma– hair of the head sperma– seed. Tufts of hairs on seed. 20 species – all Australian
Daviesia	Hugh Davies. Welch botanist 1739–1821. 60 species – all Australian – mostly Western Australia.
Goodia	Peter Good. Collector under R. Brown, HMS Investigator. Died Sydney 1803. 2 Australian species.
Indigofera	Indigo bearing. 2 tropical species produce indigo. 350 species in warmer parts of globe.
Gompholobium	gomphes – a club. lobos – pod. Clubshaped pod. 25 species – all Australian
Hardenbergia	After Countess von Hardenberg – sister of Baron Von Hugel who collected plants in Western Australia in 1833. 15 species – all Australia
Pultenaea	Richard Pulteney – English botanist 1730–1801. 90 species – all Australian.
Aotus	A – not, Otos – ear. Referring to bracteoles. 12 species – all Australian.
Dillwynia	L.W. Dillwyn, English botanist 1778–1855. 12 species – all Australian
Platylobium	Platys – flat lobos – pod. Hence Flat-peas. 4 species – all Australian.
Bossiaea	Bossieu de la Martiniere, botanist on La Perouse expedition. Expedition perished on reefs near Island of Vanikoro in 1788.
Hovea	A.P. Hove, Polish collector for Kew Gardens. 12 species – all Australian. 40 species all Austr
Glycine	Glykys – sweet. 20 species in Asia, Africa, Australian

Key to Sphaerolobium species.

1. Branchlets numerous, to c. 20mmlong, divaricate, forked, spinescent
Sphaerolobium acanthos

1a Branchlets few, mostly more than 20mm long, ascending, not forked, not spinescent 2

2 Calyx and bracteoles lead-grey; wings equal to keel; style wing much longer than broad, more than One-quarter the length of style
Sphaerolobium minus

2a Calyx and bracteoles darkly punctate; wings longer than keel; style wing nearly as long as broad, less than one-quarter the length of style. Sphaerolobium vimineum

Sphaerolobium minus sometimes grows sympatrically with S. vimineum. but is apparently more common and wide spread in the eastern States.

Sympatrically existing in the same or overlapping areas.

Almaleea is not near Pultenaea in key to Fabaceae; but is next to Dillwynia which it differs from by Standard slightly longer than broad; inflorescence a terminal head surrounded by an involucre of leaves. Separation from Pultenaea is that Almaleea has stipules free or absent while Pultenaea has them fused at least at base; Pultenaea has bracteoles conspicuous, persistent, attached to, or immediately below calyx & Almaleea has bracteoles absent; or if present inconspicuous and/or deciduous, attached below calyx.

Difference between Oxylobium & Podolobium; Podolobium stem-hair peltate (shield-like), calyx campanulate (bell-shaped); upper 2 calyx teeth valvate (edge to edge), lower 3 teeth successively overlapping upper teeth, teeth recurved at anthesis; seeds not or only palely mottled.
Oxylobium stem-hairs simple, calyx not as above; calyx teeth all valvate, not recurved at anthesis; seeds darkly mottled.

Callistachys as for Oxylobium above & difference between it & Oxylobium is :-
Oxylobium bracts simple; stipules vestigial or absent; inflorescence unbranched.
Callistachys bracts trilobed; stipules conspicuous; inflorescence branched.

PEA PLANTS

DILLWYNIA — Low shrubs, narrow leaves, flowers yellow & red; standard wider than high.

PULTENAEA — Large family therefore variable in habit and leaves. Leaves usually narrow but not always and when broad often widest at apex. Stipules present at base of leaves. Flowers small but can be singly, in tight heads or loose clusters, usually towards the ends of the branchlets. Tend to be willowy plants but sometimes stiff.

BOSSIAEA — Small shrubs or prostrate. Leaves lance-shaped, pointed, broadest at base, bright green. Flowers usually singly.

PLATYLOBIUM — Just two species around here. Leaves stiff , in pairs. One species a shrub with 1-2" broad leaves. Other species a trailing plants with 3 lobed leaves with obtuse angle between side lobes and pointed apex. Flowers red & yellow with brown hairy calyx.

DAVIESIA — Leaves tough and bitter to taste. Flowers, yellow & red, are in spikes with reddish bracts below flowers. Flowers brown at centre. Mostly big shrubs.

GOMPHOLOBIUM — Leaves in 3s from a central point. Buds indigo and flowers big, lemmon-yellow. Back petals main part of flower.

GOODIA — Tall slender shrub, leaves 3 broad leaflets (like clover), flowers pale yellow with little red at centre.

SPHAEROLOBIUM — Small yellow and red flowers in cylindrical shape around rush-like stem. Mostly leafless. Stems about 1 foot high.

INDIGOFERA — Shrubs with pinnate leaves and long clusters of small mauvish-pink flowers.

SWAINSONIA — Often spreading or sprawling plants. Flowers pink to purple, usually rather large in erect stalks. Terminal leaflet usually much longer than others which are paired.

HARDENBERGIA — Purple flowers. Creeper or climbers. Stiff leaves.

KENNEDIA — Creeper mostly on the ground. Leaflets in threes. Flowers red.

LOTUS — Sprawling plant with leaflets in 5s. Flower heads with up to 8 yellow flowers. Introduced species.

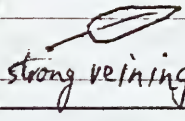
TRIFOLIUM — These are like little yellow clover-heads. Light green leaves. Introduced.

Pea Genera Key Characteristics

Groups Gp 1. All 10 stamens free to base
Gp 2. All 10 joined but open along upper side
Gp 3. 9 Stamens joined – 1 free

Genus	Group	Flower Colours	Leaves.	Pods.	Other
Daviesia (BITTER PEA)	1	Red Orange Yellow	Often phyllodes - flat *	Often flattened Triangular with straight upper edge & curling open. *	1. Often reddish on young * leaves & stems. 2. Prickles & thorns 3. Flowers in umbrellas 4. Leaves taste bitter
Dillwynia (PARROT PEA)	1	Red, Gold or Orange, yellow, Red. * Standard wider than high	Grooved on upper surface, rolled into near cylinder. *	Egg shaped or Oblong	1. Healthy Shrubs
Gompholobium (WEDGE PEA)	1	1. Yellow or Pink. *2. Greyish on back of Standard. 3. Standard longer than wings or keel.	Simple or Compound. (Digitate or Pinnate.)	Broadly ovoid or Cuboid	Shrubs or under-shrubs.
Oxylobium	1	yellow or Orange	Hairy		
Podolobium	1				
Pultenaea (BUSH PEA)	1	Usually yellow 1 Species pink	Simple, entire * Some characteristic shapes. eg.	egg-shaped, 2 valved.	1. Usually stipules at * leaf stem base. 2. Shrubs, undershrubs & a matt plant.
Sphaerolobium (Globe Peas)	1	Yellow, Orange Red or yellow & red.	Leaves usually absent or narrow-linear. *	Globular or compressed.	1. Small Shrubs or Undershrubs *2. Fine, often rush-like stems.
BOSSIAEA	2	Yellow-Brown Orange range Keel broad.	1. Simple, Sometimes scale-like or absent. 2. Characteristic * Shapes.	Sessile almost flat 2 valves that separate completely on dehiscence	1. Bracts at base of pedicel (Imbricate) 2. Bracteoles often ½ way along pedicel (to flower) 3 Stems terete or angular
Hovea	2 Stamens alternately long & short.	Mauve to * Deep Purple occasionally White	Simple, alternate	Sessile or short stalk * Spherical or egg-shaped	1. Shrubs or Undershrubs *

Pea Genera Key characteristics

Genus	Group	Flower Colours	Leaves	Pods / Hinged?	Other
Platylobium (Flat Peas)	2	Yellow, Orange, Red Keel blunt	characteristic Stipules *	Flat, winged on upper join 2 Valves roll back on maturity	1. Wiry shrubs 2. Upper 2 calyx lobes large & like bracts to enclose petals in bud.
Glycine	3 *	Small Flowers purple or pink	Compound. 3 leaflets accessionaly 5 or 7.	Oblong	1. Slender, twining plant. 2 Appressed hairs turning downwards on stems & upwards on leaflets.
Hardenbergia	3	1. Purple Violet * 2. Long Sprays * at Branch ends	Simple (in Victoria)  strong veining	Flattened.	Prostrate or Climbing (only H. violacea in Vic)
Indigofera	3	Rose or * Purple Keel often hairy on back & margin with spur or pouch on each side near base	Compound. Varying numbers of leaflets	Usually Cylindrical	* Shrubs or Herbs. * Usually clothed with appressed hairs
Kennedia (Coral Pea)	3	* Red Large flowers	Pinnate 3 leaflets on long petiole		1. Persistent stipules & also stipels on base of leaflets. * 2. Twining or Prostrate.
	2	Yellow	Bipinnate	long. "or more	All shrub.

PEA PLANTS

DILLWYNIA Low shrubs, narrow leaves, flowers yellow & red; standard wider than high.

PULTENAEA Large family therefore variable in habit and leaves. Leaves usually narrow but not always and when broad often widest at apex. Stipules present at base of leaves. Flowers small but can be singly, in tight heads or loose clusters, usually towards the ends of the branchlets. Tend to be willowy plants but sometimes stiff.

BOSSIAEA Small shrubs or prostrate. Leaves lance-shaped, pointed, broadest at base, bright green. Flowers usually singly.

PLATYLOBIUM Just two species around here. Leaves stiff , in pairs. One species a shrub with 1-2" broad leaves. Other species a trailing plants with 3 lobed leaves with obtuse angle between side lobes and pointed apex. Flowers red & yellow with brown hairy calyx.

DAVIESIA Leaves tough and bitter to taste. Flowers, yellow & red, are in spikes with reddish bracts below flowers. Flowers brown at centre. Mostly big shrubs.

GOMPHOLOBIUM Leaves in 3s from a central point. Buds indigo and flowers big, lemmon-yellow. Back petals main part of flower.

GOODIA Tall slender shrub, leaves 3 broad leaflets (like clover), flowers pale yellow with little red at centre.

SPHAEROLOBIUM Small yellow and red flowers in cylindrical shape around rush-like stem. Mostly leafless. Stems about 1 foot high.

INDIGOFERA Shrubs with pinnate leaves and long clusters of small mauvish-pink flowers.

SWAINSONIA Often spreading or sprawling plants. Flowers pink to purple, usually rather large in erect stalks. Terminal leaflet usually much longer than others which are paired.

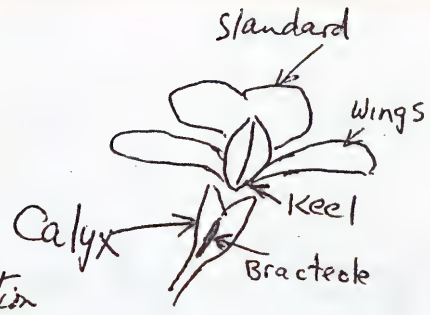
HARDENBERGIA Purple flowers. Creeper or climbers. Stiff leaves.

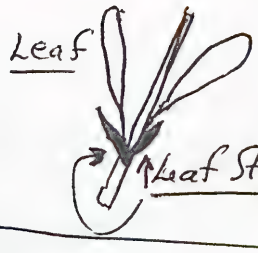
KENNEDIA Creeper mostly on the ground. Leaflets in threes. Flowers red.

LOTUS Sprawling plant with leaflets in 5s. Flower heads with up to 8 yellow flowers. Introduced species.

TRIFOLIUM These are like little yellow clover-heads. Light green leaves. Introduced.

Parts of Pea Flower.





Important Parameters for Identification

Stamen Arrangemat.

Group 1 has all stamens free to base
(Daviesia, Dillwynia, Eutaxia, Gompholobium, Oxylobium, Pultenaea, Sphaerolobium, Viminaria)

Group 2 All stamens joined for much of length, open along top edge
(Bossiaea, Goodia, Hovea, Platylobium)

Group 3 Like Gp 2 but one stamen free
(Glycine, Hardenbergia, Kennedya, Indigofera, Swainsona)

Flower Shape & Colour.

Dillwynia has a relatively wide flower (compared to height)

Gompholobium is greyish on back of flowers

Petals Clawed?

Calyx.

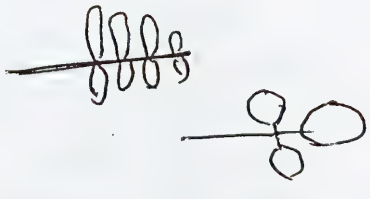
- Various Lobe formations.

Bracteoles

Leaf. - Arrangement

e.g. Indigofera pinnate

Kennedya 3 leaflets



Leaf Shape & Taste

e.g. Daviesia New leaves / Phyllodes are reddish & have a bitter taste.

Stipules commonly present for Pultenaea.

Genus by Genus.

Dillwynia

1. Flower much wider than high . Red, Gold or Orange, yellow Red
2. Linear leaves rolled up into a near cylinder.
   Grooved on upper surface.
3. Heathy shrubs

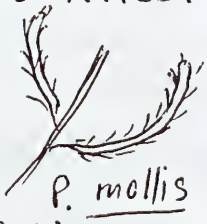
Daviesia

1. Leaves usually phyllodes – flat & stiff
2. New leaves & stems often reddish.
3. Pods often flattened with straight upper edge
   Pods Curling open
4. Leaves taste bitter

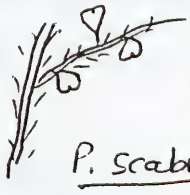
Pultenaea

1. Usually have stipules at leaf stem base.
2. Leaves simple, entire, with wide variety of leaf shapes which can be useful identifiers:– e.g. (see Galbraith p 147).

P. daphnoides

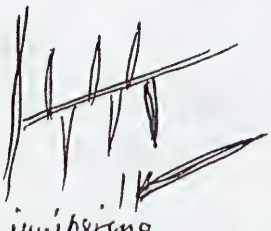

P. mollis
(soft, hairy, inrolled, Curved)

P. muelleriii
Narrow lanceolate
slightly incurved
acute tip
Stipules prominent.
Flowers solitary, Terminal
Numerous bracts on calyx


P. scabra

or
Rough Bush Pea
Hairy leaves & stems.
leaves variable in shape.

3. Commonly has bracteoles on calyx.
4. The local P. gunnii is a small shrub, under 1 metre, with small leaves & numerous flowers, golden yellow with darker, reddish centres.


P. juniperina
Rigid leaves, sharp tipped

Platylobium

1. Small wiry shrubs.
2. Flowers bright-yellow, orange, red. Standard large
3. Distinctively shaped leaves.

Heartshaped
Leathery
Net-veined

P. formosum

4. Pods usually flat, oblong.
5. Pod winged

P. obtusangulum

Fine pungent tips

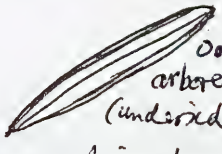
6. Upper calyx lobes big & rounded & hairy. Lower lobes v. small & pointed

Gompholobium. (Wedge Pea)

digitate leaves.

1. Flowers greyish on back of standard.
2. Flowers often yellow, largish. Standard longer than wings or keel.
3. Leaves pinnate, or divided to base into 3 narrow leaflets (digitate)
4. Shrubs or undershrubs.

Oxylobium



O. arborescens (underside)

1. Leaves often net-veined
Sometimes with Tubercules amongst the veins.
2. Some local ones have longish elliptical leaves with edges curling down.
3. often densely flowered in terminal or axillary sprays.
4. Flowers often yellow to orange.
5. Stipules minimal or absent.
6. Stem hairs simple
7. Pods to 8mm long, egg-shaped, hairy. Not divided longitudinally. Seeds w/o aril.
8. Includes. O. arborescens, cordifolium, ellipticum, pultenae, robustum
9. Calyx teeth all edge to edge.

Podolobium

1. Leaf venation conspicuously netted (like Oxylobium)
2. Pods often elongated & narrow (relative to Oxolobium). 1cm long or longer.
3. Stem hairs peltate (shield on top?)
4. Calyx teeth - Upper teeth edge to edge. Lower teeth overlapping teeth above
5. Lack of stipules, & dense flowering probably similar to Oxylobium.
6. Includes. P. procumbens, ilicifolium, alpestre

Callistachis was Oxylobium lanceolatum - ref Bon's page.

Mirbelia

1. Pod has internal wall dividing longitudinally
2. Flowers yellow. brown, & purple or pink.
3. Flowers in small terminal or axillary clusters
4. Bracts & bracteoles tiny or absent.
5. Standard is round or kidney shaped & longer than wings or keel.

Sphaerolobium (Globe Peas)

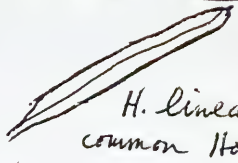
1. Globular pods stalked from calyx.
2. Fine, often rush-like stems.
3. Leaves absent or short & thread-like
4. Bracts & Bracteoles fall off early
5. Calyx lobes tend to fold over each other.
6. Upper calyx lobes larger & joined higher up.

Bossiaea

1. Flowers showy, in yellow-brown-red colors.
2. Standard petal appears to dominate the flower.
3. Standard roundish to kidney-shaped.
4. Bracteoles often half way along the pedicel
5. Pods are flat & 2 surfaces separate completely
6. Seeds have aril.
7. Stems can be terete or angular, flattened, winged, or spine-like.
8. Leaves sometimes reduced to scales or absent.
9. Calyx Lobes - Upper 2 more or less united & broader & larger than other 3.

Hovea

1. Flowers mauve to deep purple, occasionally white.
2. Leaves simple, somewhat longer than broad.
3. Leaves usually hairy on undersurface.
4. Calyx mostly 2-lipped - upper broader, lower shorter
5. Pod spherical or egg-shaped
6. Bracteole at base of calyx.



H. linearis Leaf
common Hovea

Indigofera

1. Long, fine pods.
2. Compound leaves - pinnate
3. Flowers rose or purple often in axillary sprays or spikes
4. Plants usually clothed with appressed hairs
5. Flower has spur, or pouch, on each side near base.

Glycine

1. Insignificant creeper
2. Flowers small, purple or pink.
3. Leaflet 3 occasionally more.
4. Appressed hairs on stems and leaflets.

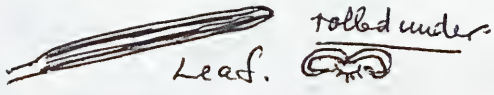
Glycine clandestina

Swainsona

1. Colors blue-purple to bronze-red.
2. Undershrubs & herbs
3. Pinnate leaves
4. Flowers in axillary sprays.
5. Longish pods.
6. Style bearded.

Aotus. p13 Woolcock & Eutaxia p28 Woolcock

1. Numerous showy flowers in leaf axils or branch ends, Small, yellow-brown-re flowers.
2. stipules absent.
3. Upper Calyx lobes broad & joined high up.
4. Standard is orbicular (circular)
5. Petals have rather long claws.
6. Bracts. small, often deciduous.
7. Simple leaves, scattered or in whorls of 3.
8. Leaf edges closely rolled back over a hairy undersurface
9. Leaf shape oblong-linear.



Eutaxia

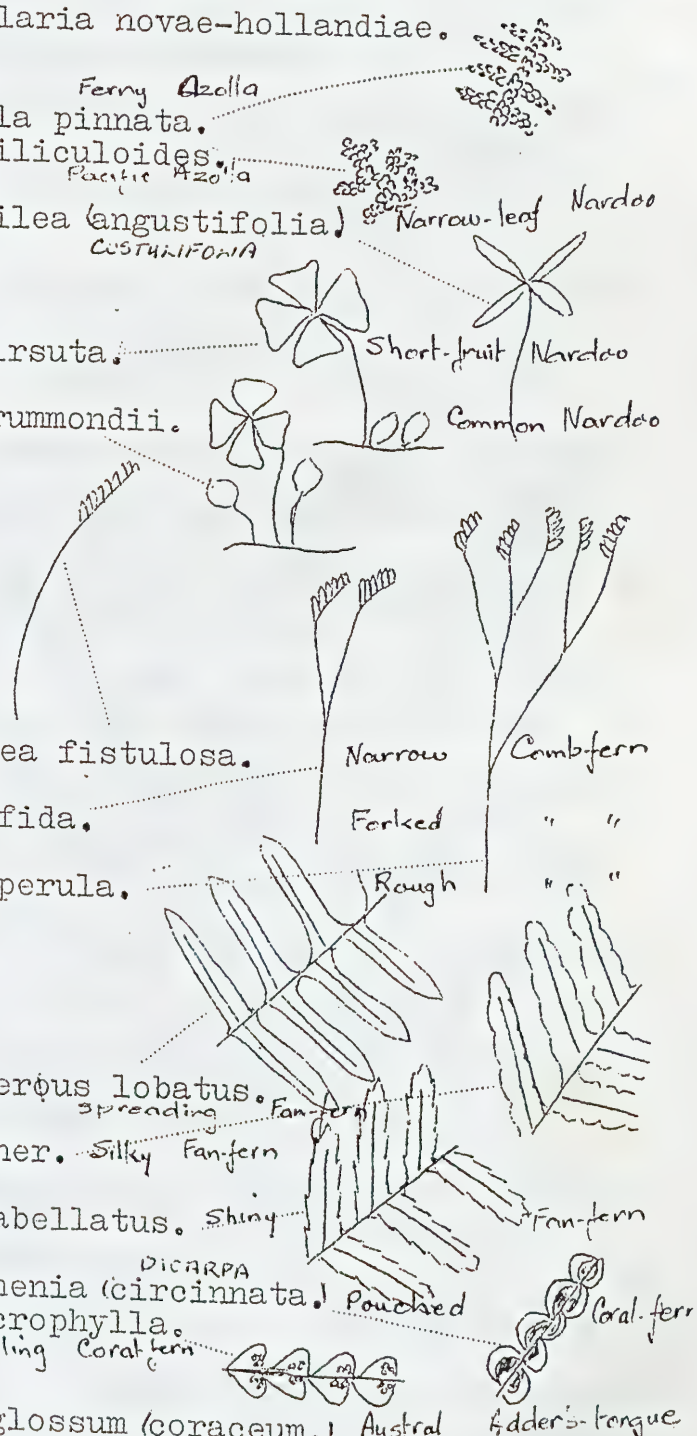
1. Leaves small & opposite (usually)
2. Leaves decussate in pairs, i.e. alternately at right angles (for Common Eutaxia, E. microphylla) Margins not fringed.

3. Keel. obtuse (blunt ended) usually deeply red.
4. Pod on long stalk from Calyx; Obovoid - (more or less egg-shaped).
5. Shrub 1 to 1.5 m.
6. Ribs of Calyx not conspicuous

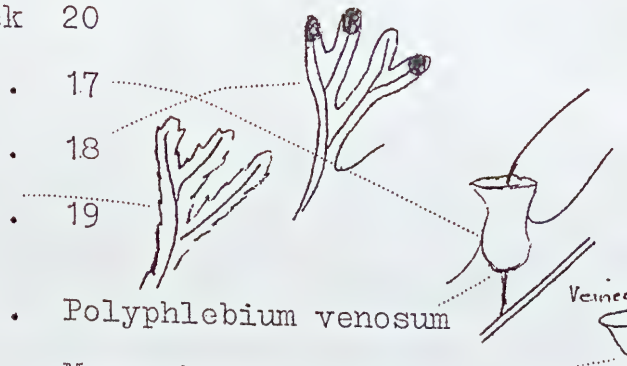
A KEY TO VICTORIAN FERNS.

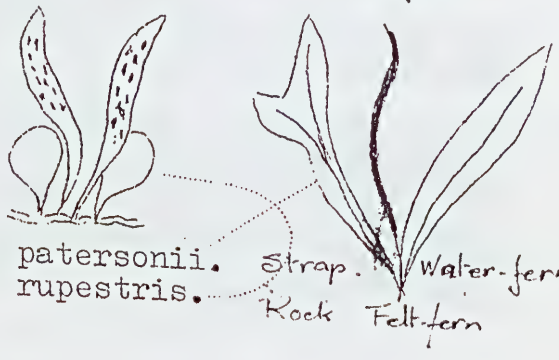
By Peter Turner 1967

1	Plants small, free floating like duckweed.....	2
	Fronds rather like four leaved clover.....	3
	Barren fronds threadlike.....	Pilularia novae-hollandiae.
	Plant not as above.....	5
2	Plant regularly branched.....	Azolla pinnata.
	Plant irregularly branched.....	A. filiculoides.
3	Pinnae very narrow, plant small	Marsilea angustifolia.
	Pinnae triangular.....	4
4	Fruiting body on an extremely short stalk.....	M. hirsuta.
	Fruiting body on a long stalk (1-2 cm.).....	M. drummondii.
5	Fertile fronds formed into a 'comb' on a wiry stalk.....	6
	Fronds repeatedly forking.....	7
	Each frond divided into fertile and barren parts.....	10
	Fronds not as above.....	11
6	Stalk simple, smooth, round, hairless.....	Schizea fistulosa.
	Stalk bifid, slightly rough, flattened, hairy.....	S. bifida.
	Stalk trifid or more, rough flattened, hairy.....	S. asperula.
7	Pinnules lobed.....	9
	Pinnules not lobed.....	8
8	Leaf margins entire, pinnules angled at about 80 degrees...	Sticherus lobatus.
	Leaf margins crenate, pinnules angled at about 60 degrees...	S. tener.
	Leaf margins toothed, pinnules angled at about 60 degrees...	S. flabellatus.
9	Sporangia enclosed in a pouch.	Gleichenia circinnata.
	Sporangia exposed.....	G. microphylla.
10	Barren part of frond simple, fertile part a simple spike..	Ophioglossum coraceum.
	Barren part of frond simply pinnate.....	Botrychium lunaria.
	Barren part of frond bi-to tri-pinnate.....	B. australe.

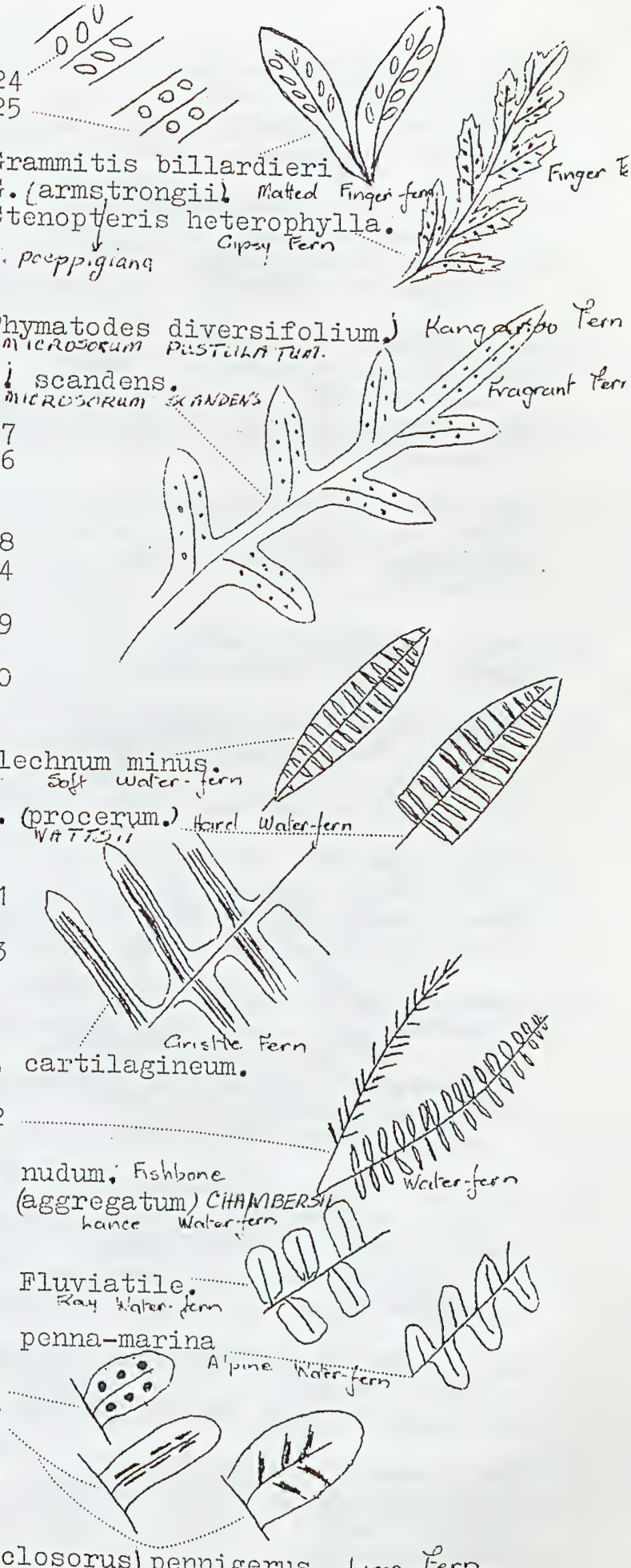


11	Short, stout trunk, no hairs or prickles on frond bases...	Todea barbara.	Austral King-fern
	Elongated trunk, hairs, not prickles, on frond bases.....	Dicksonia antarctica.	Soft Tree-fern
	Elongated trunk, prickly frond bases.....	12	
	No trunk, plant creeping or tufted.....	15	
12	Trunk slender (up to 50' x 5")..	13	
	Trunk much more than 5" thick (up to 1' or more).....	14	
13	Trunk with smooth frond scars.....	Cyathea cunninghamii.	Slender Tree-fern
	Trunk with persistant prickly frond butts.....	C. leichhardtiana.	Prickly " "
14	Trunk with persistent prickly frond butts.....	C. australis.	Rough " "
	Trunk with persistent, rough, not prickly, frond butts.....	C. marcescens.	Skirted " "
15	Small, delicate ferns, fronds one cell thick.....	16	
	Fronds more than one cell thick	20	
16	Indusium tubular.....	17	
	Indusium otherwise, fronds entire.....	18	
	Indusium otherwise, fronds toothed.....	19	
17	Long bristle protruding from the indusium.....	Polyphlebium venosum	Veined Bristle-fern
	Short bristle protruding from the indusium.....	Macroglena caudata.	Jungle Bristle-fern
18	Frond 4"- 8", rachis winged to base.....	HYMENOPHYLLUM Mecodium australe.	Austral Filmy-fern
	Frond 2"-6", stipe not winged, bipinnate.....	" (M.) rarum.	Narrow " "
	Frond 4"-12", stipe not winged, tripinnate.....	" (M.) flabellatum.	Shiny " "
19	Frond rather flat.....	Hymenophyllum cupressiforme.	Common Filmy-fern
	Frond convex, pinnae bent down..	H. peltatum.	Alpine " "
20	Fronds not divided to midrib...	21	
	Fronds divided to midrib.....	26	
21	Fertile and barren fronds different.....	22	
	Fronds of one kind.....	23	
22	Fronds up to 2', tufted.....	Blechnum patersonii.	Strap Water-fern
	Fronds fleshy, plant creeping..	Pyrrosia rupestris.	Rock Felt-fern



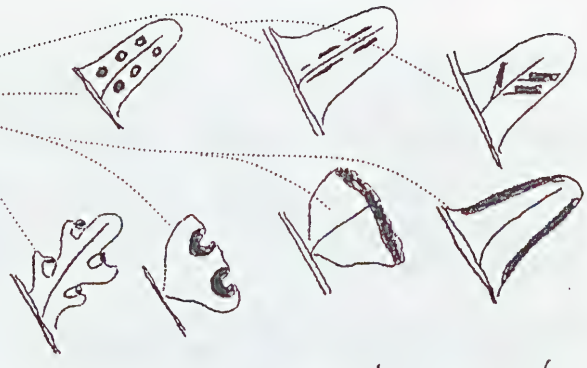


23 Sori elongated or elliptical.....	24	
24 Sori circular.....	25	
Frond simple, plant tufted.....		Grammitis billardieri
Frond simple, plant creeping...		G. (armstrongii) Matted Finger fern
Frond pinnate.....		Ctenopteris heterophylla. Gipsy Fern
		G. poeppigiana
25 Frond slightly leathery plant odourless, segments broad.....		(Phymatodes diversifolium.) Kangaroo Fern
Frond membranous, faintly aromatic, segments narrow.....		(P.) scandens.
26 Fronds pinnate.....	27	
Fronds bi- or tripinnate.....	36	
27 Separate fertile and barren fronds.....	28	
Fronds of one kind.....	34	
28 Pinnae attached by midrib only.	29	
At least some pinnae attached by full breadth.....	30	
29 Pinnae reducing in length towards the base.....		Blechnum minus. Soft Water-fern
Pinnae hardly reducing in length toward the base.....		B. (procerum.) Hard Water-fern
30 Longest segment of barren frond longer than 2 cm.....	31	
Longest segment of barren frond less than 2 cm.....	33	
31 Fertile and barren fronds similar, sori in two lines either side of pinnae ribs...		B. cartilagineum. Crisitte Fern
Fertile and barren fronds dissimilar.....	32	
32 Stems black and shining.....		B. nudum. Fishbone Water-fern
Stems pale.....		B. (aggregatum) CHAMBERSII hance Water-fern
33 Plant tufted, some pinnae attached by midvein only.....		B. Fluviatile. Ray Water-fern
Plant creeping, all pinnae attached by full breadth.....		B. penna-marina Alpine Water-fern
34 Sori circular or oval.....	35	
Sori linear.....	37	
Sori covering back of frond completely.....	66	
35 Sori circular, stipe not winged.....		(Cyclosorus) pennigerus. Lime Fern PNEUMATOPTERIS PENNIGERA
Sori oval, stipe winged to base.....		Ctenopteris heterophylla. Gipsy Fern

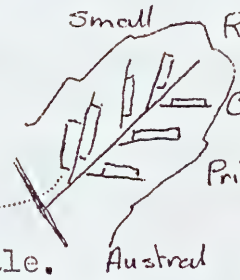


36 Sori linear..... 37
Sori circular or oval..... 44
Sori along the margin..... 55
Sori in a cup..... 67

37 Sori parallel with midvein of pinna 38
Sori at an acute angle with midvein of pinna 39



38 Most pinnae attached by midvein — Doodia caudata. Small Rasp-fern
Most pinnae attached by their full breadth..... — D. media. Common Rasp-fern
All pinnae attached by their full breadth..... — D. aspera. Prickly " "



39 One vein in each pinnulet with sori on either side..... — Athyrium australe. Austral lady-fern.
Sori never on either side of a vein..... 40

ALLANTODIA AUSTRALIS

40 Fronds simply pinnate..... 41
Fronds bi- or tripinnate..... 43

41 Fronds thick and leathery, stipe green, coastal rocks.... — Asplenium obtusatum. Shore Spleenwort
Fronds not thick and leathery, stipe dark below..... 42

42 Fronds lax and trailing, pinnae fan shaped..... — A. flabellifolium. Necklace Fern
Plant erect, pinnae not fan shaped..... — A. trichmanes. Common Spleenwort.

ASPLENIUM

43 Ultimate segments fan to wedge shaped..... — A. (adiantoides.) Shredded Spleenwort
Ultimate segments as in fig., often with bulbils on frond.. — A. bulbiferum. Mother Spleenwort
Ultimate segments long and narrow as in fig..... — A. flaccidum. Weeping Spleenwort

44 Edge of frond curling over sori, fronds greenish yellow. — CALOCHLAENA (Culcita) dubia. Common Ground-fern.
Easily broken, small, rare, alpine plant..... — Cystopteris (filix-fragilis). Brittle Bladder-fern
Not as above..... 45

TASMANICA

45 Rachises with prominent, papery scales..... 46
Rachises without papery scales. 48

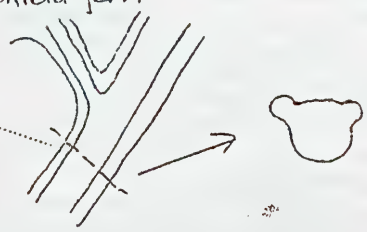
46 Plant creeping over tree or fern trunks in fern gullies, fronds broad triangular..... — Rumohra adiantiformis. Shield Hare's-foot
Plant tufted..... 47

47 Stem scales black and shining, fronds narrow triangular, ofte often with bulbils on frond.. Polysticum proliferum. Mother Shied-fern

Stem scales dull brown, frond broad triangular..... P. formosum. Broad Shield-fern

48 Edge of frond leading into a prominent ridge each side of main rachis..... 49

No prominent ridge on main rach rachis..... 52



49 Stem clothed in dark brown spreading bristles..... *Lastreopsis hispida. Bristly Shield-fern

Stem without bristles..... 50

50 Leaf dull green, pubescent, frond deeply incised, known only from Mallacoota..... L. decomposita. Trim Shield-fern

Leaf bright green, shining hairless, shallow incisions.. 51

51 Plant creeping, far east Gippsland..... L. microsora.

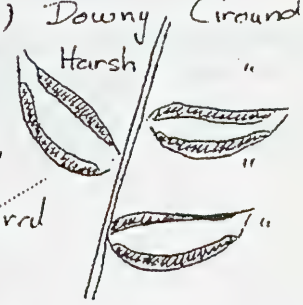
Plant tufted, damp mountain gullies..... L. (ACCUMINATA shepherdii.) Shiny Shield-fern.

52 Stipes pale..... 53

Stipes deep reddish brown..... 54

53 Hairs on stipes numerous and sticky..... Hypolepis (GLANDULIFERA punctata.) Downy Ground-fern

Hairs on stipes few..... H. muelleri. Harsh " "



54 Hairs on stipes few and coarse..... H. rugosula. Ruddy " "

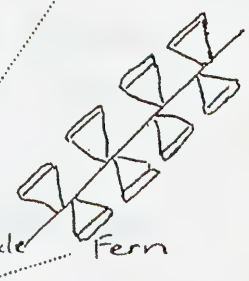
Hairs on stipes numerous and minute..... H. (AMAURORACHIS australis.) Austral " "

55 Sori almost continuous at the frond edge..... 56

Sori separated into moon shaped sections..... 64

56 Stem dark..... 57

Stem pale..... 60



57 Frond pinnate, segments linear. Pellaea falcata. Sickle Fern

Frond pinnate, segments fan shaped..... Lindsaya linearis Screw Fern

Frond bi- or tripinnate..... 58

58 Fronds tripinnate..... Cheilanthes (SIEBERI SSP SIEBERI tenuifolia.) Rock Fern

Fronds bipinnate..... 59

*Note: The genus Ctenitis has now become Lastreopsis, and Polysticum hispidum has become Lastreopsis hispida.

59 Numerous hair like scales on the undersurface..... C. distans. Bristly Cloak-fern
A dense mat of hairs on the underside..... C. lasiophylla. Woolly " "

60 Plant tough with a hard texture..... Pteridium esculentum. Austral Bracken
Plant bluish green, succulent..... Histiopteris incisa.
Plant not as above..... 61 Bat's-wing Fern

61 Frond tripinnate..... 62
Frond simply pinnate..... 63

62 Stipe brown..... Pteris tremula. Tender Brake
Stipe yellowish..... P. comans. Netted Brake

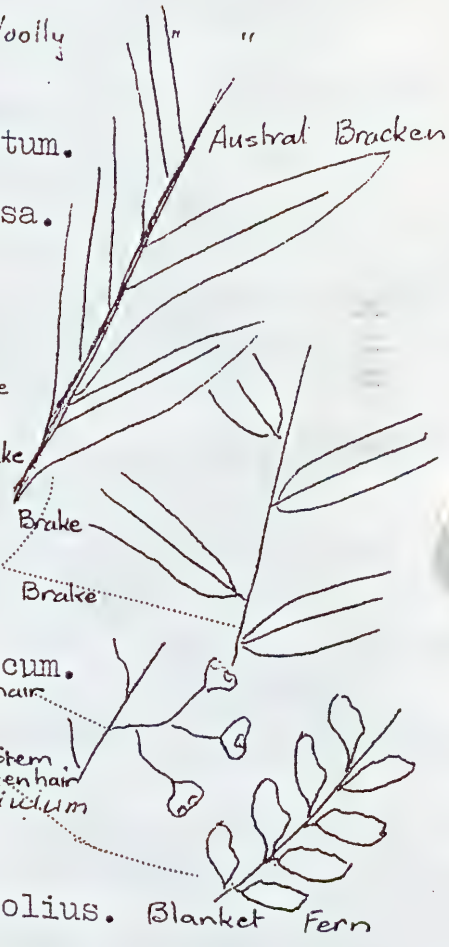
63 Pinnae joined to stem by stalk. P. vittata. Chinese Brake
Pinnae attached by full breadth..... P. umbrosa. Jungle Brake

64 Pinnules on hairlike stalks.... Adiantum aethiopicum.
Pinnules shortly stalked..... 65 Common Maidenhair

65 Plant creeping, hairless..... A. formosum. Black-Stem Maidenhair
Plant tufted, pubescent..... A. (hispidum.) hispidulum Rough Maidenhair

66 Plant covered with reddish brown hair..... Pleurosorus rutifolius. Blanket Fern
Plant pale green without hairy covering..... Anogramma leptophylla. Annual Fern

67 Stipes reddish brown, sori in a two lipped cup..... Dennstaedtia davalloides. Lacy Ground-fern
Stipes straw coloured, sori in a simple cup..... Davallia pyxidata. Cup Hare's-foot.



KEY TO VICTORIAN FERNS

Group IV **Most ferns: Osmundaceae to Blechnaceae**

1 Fronds wiry, simple or forking, apparently without lamina. Fertile heads comb-like, 1–3 cm long . . . . . *Schizaea*
Otherwise *2*

2 Fronds with paired branches forking several times (buds in axils); pinnules narrowly oblong or semicircular and small . . . . . Gleicheniaceae
Otherwise *3*

3 Usually epiphytic or rupestral; small (< 25 cm). Fronds pinnately divided with pinnae lobed or again divided. Sori separate (not elongate) and marginal or submarginal, or sporangia spread loosely along veins *4*
Otherwise *8*

4 Sporangia distributed along veins, unprotected *5*
Sori separate, protected, marginal or near margin *6*

5 Fronds softly hairy; pinnae irregularly lobed. Rock-loving . . . . . *Pleurosorus*
Fronds glabrous, thin; pinnae deeply lobed or pinnately divided. Caves, rock ledges, sheltered ground . . . . . *Anogramma*

6 Sori in from margin; indusium inflated, attached around base. Lamina membranous. Rare and subalpine . . . . . *Cystopteris*
Sori marginal *7*

7 Lamina almost translucent (mostly 1-cell thick). Sorus with true indusium in the form of two lips or funnel-shaped . . . . . Hymenophyllaceae
Lamina membranous. Sorus with false kidney-shaped indusium formed from reflexed marginal lobe . . . . . *Adiantum*

8 Ferns with a trunk*; fronds long (> 1 metre) *9*
Ferns without a distinct trunk† *11*

9 Trunk to 1 m high. Lamina bipinnate; sporangia large, irregularly spread over pinnules in lower part of frond . . . . . *Todea*
Trunk more than 1 m high. Lamina 3- to 4-pinnate; sporangia very small and grouped into small globular sori *10*

10 Frond bases smooth, with matted, red-brown hairs. Lamina elliptical and tapering towards base. Sori marginal on lobes . . . . . *Dicksonia*
Frond bases rough, with scales. Lamina wedge-shaped to narrowly triangular and reducing only slightly towards base. Sori in 2 rows away from margin . . . . . *Cyathea*

11 Fronds large, well separated along a branched, subterranean rhizome; a group referred to as 'ground-ferns'*. Rhizome and stipe bases hairy (not scaly, except in *Histiopteris*). Lamina triangular or wedge-shaped, 2- to 4-pinnate; cross-section of stipe shows gutter-shaped vascular strand (except *Pteridium*). *12*
Fronds tufted or not widely spaced; or separated along a surface rhizome (epiphytic or rupestral). Rhizome and stipe bases scaly. Frond size and shape various *16*

12 Lamina glabrous on upper surface; final segments linear to broadly oblong, margins entire or crenate. Sori continuous beneath reflexed margins *13*
Lamina with some hairs; final segments small, oval to oblong, margins deeply toothed or lobed. Sori discrete, spherical *14*

13 Stipe deeply grooved. Lamina dark green, harsh; primary pinnae stalked, sub-opposite to alternate; minor rachises with discontinuous wings; ultimate segments narrow (< 6 mm) with matted hairs on lower surface . . . . . *Pteridium*
Stipe flat. Lamina mid-green to blue-green, softer; primary pinnae sessile, opposite with paired basal leaflets ('bat's wing'); rachises not winged; ultimate segments broad (> 6 mm), without hairs . . . . . *Histiopteris*

14 Stipe and rachises with wide, shallow grooves, mottled yellow-brown; lamina yellow-green, finely divided. Sorus small, marginal; indusium 2-valved . . . . . *Culcita*
Stipe and rachises with narrow, deep grooves, colour various. Sorus with or without indusium *15*

15 Lamina wedge-shaped, finely divided (lacy); pinnules asymmetrical, hairs scattered, non-glandular, colourless. Sorus very small, marginal, deflexed; indusium 2-valved with inner indusium. Stipe and rachis red-brown, shiny . . . *Dennstaedtia*
Lamina triangular, not lacy; pinnules more or less symmetrical; hairs (glandular or not) often numerous, some with coloured cross-walls. Sorus marginal or submarginal without inner indusium, protected or not by reflexed marginal tooth. Stipe various . . . . . *Hypolepis*

16 Frond simple or deeply lobed (pinnatifid) *17*
Frond 1-pinnate or more divided *21*

17 Fronds tufted *18*
Fronds separated along a creeping surface rhizome *19*

18 Fronds always simple*, margins entire. Sori discrete, linear to oblong, in 2 rows and usually oblique to midrib. Epiphytic or rupestral . . . . . *Grammitis*
Fronds simple to deeply lobed, margins finely serrate. Dimorphic with fertile fronds very narrow and sori continuous beside midrib. Terrestrial . . . . . *Blechnum*

19 Fronds simple to deeply lobed, often large (> 10 cm), glabrous; veins netted and easily seen. Sori globular, distant, in 2 rows. Epiphytic or rupestral . . . . . *Microsorum*
Fronds simple, small (< 8 cm), fleshy with veins hidden. Sori often crowded *20*

20	Fronds of one kind, glabrous. Sori elongate, 2 to 4 pairs near tip, merging into a single mass. Rupestral	*Grammitis*
	Fronds dimorphic, densely covered with stellate hairs especially on lower surface. Sori numerous, sometimes confluent. Epiphytic or rupestral	*Pyrrosia*
21	Frond pinnate with pinnae undivided	*22*
	Frond pinnate with pinnae lobed or more divided	*28*
22	Sori continuous	*23*
	Sori discrete	*26*
23	Sorus along outer margin of fan-shaped pinna (< 1 cm) and protected by membranous indusium opening outwards	*Lindsaea*
	Sorus along lateral margins of pinna or in 2 rows adjacent to midvein	*24*
24	Fronds dimorphic (except *B. cartilagineum*), fertile lamina much reduced with sori covering lower surface	*Blechnum*
	Fronds not dimorphic; sori protected by reflexed, membranous lateral margins	*25*
25	Pinnae less than 6 cm long, oblong to sickle-shaped; dark rachis densely covered with scales and hairs	*Pellaea*
	Pinnae more than 5 cm long, very narrow; pale rachis bare or with scattered hairs	*Pteris*
26	Sori marginal, protected by kidney-shaped, reflexed marginal flaps	*Adiantum*
	Sori superficial	*27*
27	Scales clathrate. Sori oblique to midvein or along flabellate veins	*Asplenium*
	Scales not clathrate. Sori in rows parallel to midvein	*Doodia*
28	Fronds 1-pinnate with pinnae lobed (sometimes almost to rachis)	*29*
	Fronds 2-pinnate or more divided	*31*
29	Epiphytic or rupestral. Fronds less than 25 cm long, tufted; stipe with single vascular strand (shallowly V-shaped). Sori oval, naked, one per lobe	*Ctenopteris*
	Terrestrial. Fronds more than 25 cm long; stipe with 2 vascular strands at base uniting to form U-shaped strand. Sori otherwise	*30*
30	Lowest veins in adjacent lobes joining to form single excurrent vein. Sori round, naked or with kidney-shaped indusium, in 2 rows on lobes	Thelypteridaceae
	Veins all free. Sori elongate, indusiate, in 2 rows on lobes and oblique to midvein	*Lunathyrium*
31	Surface rhizome creeping, coarse and densely covered with peltate scales. Fronds shiny, leathery, 3- to 4-pinnate; pinnae bases thickened and decurrent as ridges on side of rachis	*32*
	Rhizome otherwise, scales not peltate. Fronds with 2 or more divisions	*33*
32	Sori about half way between margin and midvein, spherical with circular peltate indusia. Usually epiphytic or rupestral	*Rumohra*
	Sori near margin, flat with cup-shaped indusia attached along sides and opening towards margin. A rare rupestral fern of the Grampians	*Davallia*
33	Frond open with fine rachises; pinnules small, discrete, stalked and fan-shaped to wedge-shaped (at least, at base); veins forked equally, several times	*34*
	Otherwise, pinnules each with a central vein	*35*
34	Sori on outer margins, separate, each protected by a small, reflexed, oblong to kidney-shaped lobe	*Adiantum*
	Sorus continuous (or almost) along upper and outer margins of pinnules; indusium delicate, attached along base and opening outwards	*Lindsaea*

From: Duncan, BD & Isaac, G. Ferns and Allied Plants of Victoria, Tasmania & South Australia. MUP. 1986

35	Sori continuous or interrupted beneath reflexed leaf margins	*36*
	Sori discrete, away from margins (if near margin, then margin not reflexed)	*37*
36	Small ferns (less than 30 cm). Sori protected by reflexed leaf margins interrupted by lobing. Usually among rocks	*Cheilanthes*
	Large ferns (taller than 50 cm). Sori protected by continuous narrow bands of reflexed lateral leaf margins	*Pteris*
37	Sori elongate. Stipe with 2 separate vascular strands at base uniting above into single strand which continues into rachis	*38*
	Sori round. Stipe and rachis with more than 2 separate vascular strands (3 to 7)	*39*
38	Vascular strand in upper stipe gutter-shaped. Sori with inflated sausage-shaped indusia. Scales not clathrate	*Diplazium*
	Vascular strand in upper stipe with 4 arms (X-shaped). Sori with elongate, flat, membranous indusia. Scales clathrate	*Asplenium*
39	Scales prominent at stipe base and on rachis. Rachis with deep narrow groove (without hairs). Indusium round with central stalk	*Polystichum*
	Scales finer and less prominent at stipe base, absent or scattered on rachis. Rachis with shallow, hair-filled groove. Indusium round to kidney-shaped, attached along radius	*Lastreopsis*

*1. Festuca arundinacea Tall Fescue. Fescue.

1994 Nov 1. Growing in Casuarina Reserve Fulham.

Ficinia nodosa
(Isolepis nodosa).

Scirpus nodosus. Knotty Club-rush.

1987 April 22nd. Flowering in pine plantation near Nicholls Rd. Giffard. Knot of spikelets at end of culm or sublended by bract (or spike) which gives culm the effect of a pointed end. Same effect on ~~leaves~~ culms without balls. Spikelets round, dense with all spikelets pointing outwards. Head sessile.

Illustration in Fuhrer, Rotherham. et al. P. 102.

1993 Feb 26th Growing on marshy area on Red Bluff beach near Corner Inlet.

1994 Oct 28 In fruit in Tgon Sth Reserve

1996 Oct 12th " " " Paradise Beach at 2nd pipeline in N.P.

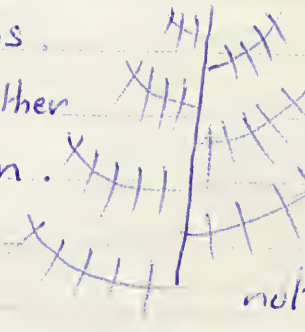
Dec " " " Old Melb Rd near Latrobe Rd. Morwell.

1997 Jan 18th " " " Livingstone Ck near Omeo.

2002 Apr 27th " " " Heyfield Wetland.

2003 June Name change used in Census

Ficus coronata Sandpaper Fig.

1987 Oct 5 Tree growing in jungle gully or rainforest area near Smellie's Creek I think. It was on an inlet on Mallacoota lake before we get to Fairhaven. There were several trees in the area but no flowers that we saw. leaves irregularly toothed, large - about 5" long and 2½" wide, very rough to touch above. Veins very conspicuous on underneath side at right angles to secondary veins.  often almost meeting tertiary veins on either side. Stems very hispid & brown. leaves withered before we got home to lodge & so specimens were not well preserved. Tree tall with relatively even bark. Photograph.

Fieldia australis

1968 Mch 30th. Found one bell in flower in reserve between Yerang Park & Cook's Reserve

Apr. 7th Many bells in flower near Cook's Reserve. Bells about 1" long & quite broad.
On 23/12/68 we found berries on these plants big broad succulent white berries about ¾" long & four sided with rounded corners.

Nov 23rd Berries at Tarra Valley - lovely cream plump berries with pink to maroon spots

1969 Feb 9th In bud up T'gen Ck. parks.

Mch 2nd Flowering " " .

1970 Oct. 8 Miss Galbraith reports Fielda flowering at Bulga Park.

1991 Jan 26th Flowering on rocky embankment on Bett's Creek Road off Tulloch And Road near Gelantipy. Club members were sure the flowers had a disciduous caps but neither Ollie nor I saw them.

1993 Jan 30 Plants growing in gully between Club. Terrace & Combienbar.

*

Fœniculum vulgare — Fennel.

1994 Nov 1. Flowering in Casuarina Reserve Fulham.
Also flowering in profusion along Downies Lane + in Welch's paddock.

Oct 30 Growing in Dawson R'way Reserve.

1600 Apr 11" " " Heyfield Wetland.

Frankenia Pauciflora (Sea heath)

1967 April 1st Flowering in Salt marsh at Loch Sport. White flowers with serrated edges to petals, not close together (flowers). Plant procumbent.

1971 Aug 22nd One flower found on plants in salt-marsh at Lakes National Park - Loch Sport.

1993 Feb 26th Flowering in salt Marsh at Shallow Inlet. Ellen describes it as leaves as if lifted, white flowers with 5 petals.

* Fumaria muralis Fumitory

1990 August 2. Flowering in the garden but we think the many tiny plants in one quadrat at Andrea Lindsay's place may be the same plants.
Corolla app 9mm long deep burgany at apex but pinkish for rest. In loose racemes on long peduncle.
Stems winged. Leaves twice or thrice pinnatisect.
Each leaf divided into 3 to 5 leaflets & each leaflet deeply divided into 3 with each lobe divided again.
Sprawling plant. No seeds yet.

ROYAL
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Bon Thompson
PO Box 644
Traralgon VIC 3844

11 March 1999

Dear Bon,

Thank you for the Fungimap records. We are always glad to get records from your part of the world.

The fungus you sent recently is a slime mould, ***Fuligo septica***. This starts off as a yellow slimy plasmodium, and eventually forms a mass of powdery spores. I've enclosed an information sheet on the species. *Fuligo* is particularly common at the moment - probably the good rains while it is still warm are favourable for its appearance.

A long while ago (Dec. 1996) you submitted a specimen of *Goodia lotifolia* from your garden, with a rust growing on the pods. This fungus turns out to be good material of ***Aecidium soleniiforme***, a rust fungus which only grows on *Goodia*. There are no specimens of this species from Victoria here at the Herbarium, so your collection is a valuable addition.

Regards

Tom

Dr Tom May

Patron
Dame Elisabeth Murdoch

Royal Botanic Gardens
Melbourne
National Herbarium
of Victoria
Royal Botanic Gardens
Cranbourne

ROYAL BOTANIC GARDENS MELBOURNE
FUNGUS INFORMATION SHEET

1. *Fuligo septica* (L.) Wiggers

Common name: Flowers of tan

Fuligo septica is a slime mould commonly found on wood chips, especially after summer rain.

Slime moulds are a curious group of organisms with two stages in their life cycle - the **plasmodium** and the **fruit body**. The plasmodium is a multinucleate mass of protoplasm which can change form and move slowly, like a giant amoeba. The plasmodium usually occurs in sheltered localities away from direct sunlight, and may be colourless, or with bright hues of red or yellow. After a period of feeding and growth, the plasmodium moves to a drier location, and gives rise to the fruit body, which produces spores. Slime moulds belong to the class Myxomycetes and have traditionally been classified as fungi, but are now regarded as belonging to the Kingdom Protoctista.

In *Fuligo septica* the **plasmodium** is usually yellow, sometimes white or creamy. **Fruit bodies** are cushion-shaped, and up to 20 cm across, and 1-3 cm thick. The surface is a fragile chalky layer, which is usually off white, but may be pink, red, yellow, greenish, brown or violet. The interior at maturity is a powdery mass of dark gray brown to blackish spores. The spores (under high power microscope) are 6-9 µm diam., globose, purplish brown, with an ornamentation of fine warts.

Fuligo septica commonly occurs on wood-chips, pine bark or mulch, and has also been observed on damp skirting boards in houses and in natural bushland, particularly on fallen bark of stringybark eucalypts. Fruit bodies occur throughout the year, but particularly after summer rain or heavy watering.

Slime moulds like *Fuligo* do not harm living plants, but feed on minute particles of organic matter or microscopic organisms that live amongst bark and litter.

There do not appear to be any records of this species causing poisoning or injury in Australia. As with any fungus producing a powdery spore mass, care should be taken not to inhale spores.

Comprehensive descriptions can be found in:

Martin, G.W. & Alexopoulos, C.J. (1969). *The Myxomycetes*. University of Iowa Press, Iowa City.

Stephenson, S.L. & Stempen, H. (1994). *Myxomycetes. A handbook of slime moulds*. Timber Press, Portland.

Coloured illustrations of Australian material are provided in:

Fuhrer (1994). *A field companion to Australian fungi*. Five Mile Press: Hawthorn. p. 159.

Tom May, Jan. 1999.

POLYPORUS HARTMANNI March 1989 Very dry year
Cooke

"
Annual, solitary, membranous, attached by a central or eccentric stem. Pilei (cap) 5 to 15 cm across and 1 cm thick commonly orbicular or when eccentric reniform (kidney shaped) sometimes almost triquetous (3 angled)

Pileus surface reddish brown with orange periphery, finely velutinate (velvety) rugulose (wrinkled) and concentrically creviced when dry, even or slightly depressed in the centre; or as often slightly convex, without a cortex; (surface tissue). Margin plane, bluntly acute, entire, even . Hymenial surface white, even or slightly concave, Stems either round or slightly elliptical when to 4 cm long and 15 mm diameter, sometimes inflated to 30 mm, even or finely velutinate, solid with a cortex.
"

I wont go into the intricate details of the spores etc except to say they are narrowly cylindrical or fusiform.

Usually growing in humus at base of tree trunks
They arise from psuedosclerotia beneath the soil, much like Blackfellows Bread. AND, of course, they vary a good deal from plant to plant.

from Cunningham's (NZ) Polyporacea

Fuhrer's Book :- Fungi as Food.
Biology of the macrofungi

Fuhrer says the majority of plants, including trees form symbiotic relationships with a number of fungi. This provides fungi with sugars & water & assists the plants with mineral & nutrient uptake. It also confers antibiotic protection for the plant against pathogenic fungi & other soil-borne organisms (disease causing)
Wood destroying fungi - unhealthy trees sometimes have heartwood consumed - weakening the tree. Parasitize insects & other fungi.

Reid Details of how fairy rings are formed.
Reproduction :- spores germinate in suitable habitat producing a new mycelium which must fuse with another mycelium of the same species in order to form fruitbodies in fungi forming mycelium.
Commerce : (bad) disease in conifers also attack pastures & crops of farmers & gardeners. especially Honey Fungus.
(good) as above on roots of plants. Establishing plantations in new areas - introducing correct fungi.

Dickenson & Lucas History :- goes back to Pliny AD 23-79. Interesting notions of how fungi came to be - Lightning etc mythology. 300 BC pupil of Aristotle remarked on fungi In Linnaeus time still no idea how they reproduced as spores are microscopic. to had to wait for ~~introdu~~ invention of the microscope before spores were discovered Book printed in 1997 & stated estimated about 200,000 species in world.
Ian Pascoe - Plant Research Institute at Burnley - thinks more than 250,000 species of fungi in Australia.
Flora of Australia - Fungi will need as many books as all the flowering plants together.

generally considered advanced type.

History. Rest on fossil ferns 250 million years (old) ago
Evidence from more ancient rocks suggest that
fungi have been present for over 2 billion years

Growth. Hypha produces enzymes which digest complecated substances into simple molecules. These are then absorbed by the hypha & provide energy for further growth. Literally tunnel way through soil or more resistant growth. Mycelium is a fluffy mass of interwoven hyphae.
Honey Fungus forms rhizomorph. black bootlace-like structure.

Fungal spores found high up in atmosphere

(1) Many saprophytic fungi grow on the humus in the soil
Some species can be restricted to member of particular trees.

(2) Parasitic fungi can cause serious damage to trees
Bracket fungi attack mature trees: Ringworm
Honey fungi, Birch Polypore.
Parasites on other fungi

(3) Mycorrhizal fungi - form intimate relationships with root ~~fungi~~ system which is beneficial to both partners - especially trees growing in poor soils.

Ecosystem:- Complex substances are broken down by fungi bacteria & microscopic animals into simple inorganic elements which are then freely available to be re-utilised. Otherwise essential nutrients required by plants & animals would remain unobtainable in the plant litter & in carcases & dung of animals.

A few square centimetres of the top 10cm of forest soil may contain at least 100 billion tiny organisms. Of these microscopic mould fungi are the most numerous & may comprise ½ the total number.

Fungi (1)

GHOST FUNGI - Pleurotus nidiformis. White gilled fungi with stalk to one side - edge fluted. pretty. When in dark room gives off a phosphorescent light. Grows in Miss Galbraith's garden at base of Gum Tree.

EARTH STAR - Geaster triplex - Cinnamon colored outside rays while centre puff ball a darker color. Mouth or opening surrounded by hairs. Rays are not split right down but only halfway. Opp. O. Ladies. 20.1.69 Glengarry Nth.

LATICE FUNGI - This fungi is found as a hollow with many rapping 6 sided areas. Areas outlined with rough white tubes. When cut these tubes contain 2 or 3 hollow sections. Sections contain fluid - slightly milky and very quick drying - that contains a host of tiny spores when examined under high magnification. The latice work comes originally from a puff-ball-like body with a very fine skin. This skin bursts when latice is fully grown. Latice then expands, becomes rigid & rolls about blown by the wind. It decomposes fairly quickly. Skin from puffball decomposes almost immediately. Found on hill above track. Latice up to 5" across and don't all decompose at the same rate. As it decomposes I imagine the fluid is released.

SPRING HYGROPHORUS - Hygrophorus marzuolus Smoky dark grey top - perhaps purplish tint. White gills very wide apart with extra short gills between at margin. Thick white hollow stem. Gills at right angles to stalk. Edge of cap fluted deeply. Cap not leaving stem easily. 2" across.

BITTER BOLETUS ~~Boletus~~ Tylopilus felleus.

Brown tan color on top, about 4½" across pores pink to purplish very deep about 1", stem orange deeply grooved about 1" across at cap. Cap flat.

GREEN TOP: Olive green cap 1½" across. Gills yellow to orange, deep dividing into 2 very near margin. Gills easily separated from stem. Stem very light at cap but ½" down a dark uneven mark & stem orange & brown from then on. Strands about 3" high Cap flat. Cortinarius austro-venetus.

ORANGE CAULIFLOWER. Ramaria Ochraceo-salmonicolor Orange to salmon colored. Stalks very thick & not branching much until very near top. About 4-5" to 5cm high. 1st Branches very thick stalk. Tips fairly thick inclined to be buff colored.

STICKY TOP Cortinarius Ochraceus.

Cap very sticky stem just as bad. Gilled fungi with yellow cap & gills (perhaps mustard better color) Gills very fine & deep branching very near margin. Stem thickening ~~as it~~ nearer the ground. Cap 1½" to 2" across stem about 2½" high. Stem with brown mark around it about ½" down from cap. Has a very peppery smell when fresh.

Fungi (2)

Woolly Verandah — Crepidotus Eucalyphorum.
Brown gilled on swamp gums at Oosterkamps. Top of cap brown & decidedly woolly. About ½" across. no stem.

CURLY STEM — Panellus stypticus.
White small, gilled on dead trees at Oosterkamps. Stem to one side and curly. About ½" across.

FLOWER FUNGI — Steurium ellegans. Flower-like brown with different shaded rings predominant color tan – mostly more than a complete ring – very fluted, thin, no gills or spores. Can have more than one attachment for one flower like head. At base of trees. Again 1969 very dark brown 4.4.69.

VEGETABLE CATERPILLARS — Cordyceps gunnii.
Growing on caterpillar of Ghost Moth.

NAVEL FUNGI - Omphalia Chromacea
Little orange umbrellas with patterned edges to cap and dimple in middle. Tiny about ⅓" across and about 1" high.

ORANGE BRACKET
Large up to 3" across. Very fine pores underneath but same bright orange color. with decided rings visible because each ring is slightly raised. Found one piece of wood with bracket going into wood all the way round.

CONE FUNGI Hygrophorus conicus.
Cap dark brown, shiny with indentation on one side. Quite a thick skin. Underneath lovely yellow gills going well down twisted stem giving real cone effect when upside down. Gills fairly thick and quite pronounced. The gills went bluish green when first bruised later turning very dark brown. Developed a very fishy odour as it deteriorated. Chester Park.

BLUE FUNGI. Cortinarius subarcheri
Blue to purple viscus cap, gills same color stem blue with orange ring.
Opp. O. Lades. 27.4.69 Bush behind sandpit.

Red Top. Boletus mellus (?)
Deep red top - circular with yellow pores underneath. Slightly visible from side view.

Fly Agaric. Big red fungi with white warts, growing under pines. (June 16th)

1968 August 9th. HAIRY CUP FUNGI. Whiskered Cups - Piziza scutellata.
Found opp. O Lade's. Before opening fungi is just a little ball ¼ in diam. all covered with long black hairs giving it a black appearance. When it opens it is a bright deep orange disc with about 2 rows of hairs showing around the edge. Discs are about ¼ in diam. They grow very close together. On black soil the immature ones are very hard to see. When kept in dry conditions hairs stood straight up.

Fungi (3)

Asco Mycetes spores in flask-shaped containers
Basidio Mycetes has hand with 4 sacs on stem

Huge Toadstool. (April 1968.)
This was a big toadstool about 1ft or more across with dark nigger brown top - fluted - Underneath it had pores. We thought it was a boletus but under examination by Mrs Lyndon, she decided it definitely was not - mainly because the pores were a skin on top of the pith and not penetrating tubes at all. Also the pith was very rubbery. The toadstool was growing in a large drain on Norm's place.

Little Blue Tacks. (29.3.69) Chlorosplenium Aeruginascens (?).
Delightful dark blue with stalk continuing into flat top just like tacks. Mostly small but a couple about ¼" across. Sagasser Rd. Growing on wood.

Little Red Toadstools (29.3.69) Hygophorus miniatus
Tiny red umbrellas ¼" across, lighter red underneath. Found in mossy place. Sagasser Rd.

Pink Whiskers. (29.3.69) Merula multifida (?)
Fine hairlike structure branched - about ½" high. Lovely pale lilac pink Waterfall Sagasser Rd.

4.4.69 Fungi plentiful along Calliginee Road.

Brown Boletus
Almost mushroom brown on top but yellow pores underneath.

Brown Gilled Brown on top yellow gills underneath
Whole fluted - going blue when crushed.

Slime Mould Collected by Mr. B. Fuhrer in pine plantation in Cochrane's Lane May 25th. 1968

Leaf of bracken fern. (dead)

Didymium squamulosum

"Whole fruiting body is covered with stellate clusters of calcium carbonate. Inside the spores are enmeshed in a network of hyaline threads called a capillitium. A broad convex yellowish columella at the base of the sporangium is characteristic of this particular species."

Identified by a Myxomycetes worker in S.A. He says it is not uncommon there.

Information from Mrs Lyndon. Photograph by Mr D. Lyndon.

Fungi (4)

Woolly-Top Boletus: Strobilomyces floccopus (?)
April 27th Bush behind sandpit. App. 4" across. Scaly top - scales overlapping broad almost ½" coming to point (½" long). Brown scales on lighter color. Underneath brown going black with red ring at top of stalk. Stalk attached in depression making pores attached ⌐. Stem 5" long straight light brown. Top at angle of about 45°.

Cinnamon Toadstool: Cortinarius Bolaris (?) 27.4.69
Orange brown cap with darker scales very small and in centre covering cap. Also dark ring round outside edge. Gills honey orange almost at right angles to stalk. Top 2" across Stem 2" long also marked with scales. Same colors at top. growing in dirt This one solitary. Bush behind sandpit.

Scaly Boletus - Boletus variegatus (?) 27.4.69
Yellowish brown with flat darker scales. This particular specimen with 2 lines across top. App. 3" across Pores dull brownish yellow, flesh yellow both turning blue when bruised or broken. Stem very dry rough yellow almost withered appearance
Bush behind sandpit.

Steely-Blue Toadstools - Leptonia lampropus (?) 28.5.69
Little steely blue about ¼" - ½" across cap. Cap rather flat - dry. Stem tall thin same color as cap. Gills flesh-colored. Bush behind sandpit.

Red Group Fungi - Cortinarius cinnabarinus 28.5.69
Bright red but not scarlet. pointed caps about

1½" across, fungi growing in quite big clump. Gills darker than cap & much more orange in color. Stem thick inclined to be grooved & approx the same color as cap but not so dense. Bush behind sandpit.

Pale Cup Fungi. Pizza rutilans (?) 28.5.69
Tiny almost flat cups about ¼" across, with stalks. Something similar to naval fungi but stalks much shorter + ⊤ shape. Underneath not gills but grooved, many of the stalks hidden in the ground so that fungi appear stalkless. Cups growing so close together that they overlap each other. Color a very watery orange color - between orange & flesh. Bush behind sandpit.

Bird Nest Fungi: Cyathus 20.7.69
Dad photographed them. Round about ¼" across with hairs around outside and tiny 'eggs' inside. Growing on wood. Glengarry North.

Toothed Fungi Hyanum repandum 20.7.69
Orange fungi - looked like two joined ◯ with stem in middle. Underside covered with teeth. Whole thing about 1" x ½" or a little more.
Glengarry North.

"Wood Blewits" Trichdoma nudum 1.7.69 6.6.70
Tannish to reddish color on top with pale lavender gills. Growing in soil. Bush behind Sandpit (Bush near Crawford's entry)

Gluey Fungi: Heotia lubrica (Tongue Fungi Group) 1.7.69
Greenish tiny tops no gills or anything, just a mass. Stalks yellow. Growing in group on ground. Bush behind Sandpit

Fungi (5)

Very Tiny Bird Nest Fungi Sphaerobolus stellatus - Darlamurla.
Very tiny green plant on rotting wood. 26.7.69.
Bird nest orange with brown 'ball' in centre. Five 'petals' to nest. "Ball" is tossed out by lining of nest popping out to become a white balloon. Action is very quick and visible 'Ball' is full of tiny spores. They still look small at 15x magnification.

Puff-ball on Cone Darlamurla.
½" across puff ball - brown - supported on 26.7.69
a tapering base of what appears to be a fibrous open structure - similar to a root system.

Black Blobs on Stems - Fawn teeth on dead stick
Xylaria hypoxylon Turkin's Creek 5-4-70
Found the juvenile plants - the fawn teeth
(ill. page 47)

Big Black with short stems - (3) Xylaria polymorpha
These blobs were many shaped some divided at top. All were rough, hard + dull black
Turkin's Creek excursion 5.4.70.
(ill. page 47)

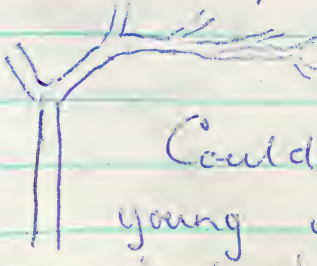
Pale Orange Fans
About ½" across - smooth on front surface but ridged round + up + down on back
Schizophyllum commune (ill. 105) Turkin's Creek Excursion. 5.4.70

Wood Covering Toothed Fungi Hydnum
genus Odontia
This fungi is creamy white with teeth lying on angle giving windswept appearance. Teeth quite long about ¼" but very fine.
Turtin's Creek Excursion 5.4.70

Babies Hands Coryne sarcoides (?)
This fungi was delightful. It was purplish brown lying ½" high but a decided hand with "fingers" in pairs & thumb in front. Rather rough with little fuzz.
(Ill. 45) Turtin's Creek Excursion 5.4.70

Velvet Foot. Collybia velutipes
These fungi were 1" across russet color with centre with velvety appearance & smooth to touch. Gills thin yellow & irregular. Stem yellow at top deepening as it goes down to very dark brown also very smooth about 2" long & bent at top so that fungi is on an angle. Cap longer than gills.
Turtin Creek Excursion (Ill 5.4.70

Very Fine Branched Coral fungi
This fungi was on tree fern trunk. The color is pale flesh-color. Each time it branches into two and finishes with a bifid end.



Could this also be the young of Xylaria hypoxylon? Trunk too Branched though. Turtin's Creek Exc. 5.4.70.

Tiny Fungi on dead fern frond. Marasmius alliaceus
Tiny 1 cm wide, hemispherical cap with concave inside. Stem black very fine. Gills very light, cap clay colored Top ribbed.
Turkin's Creek Excursion 5.4.20

Yellow Gilled Fungi. Cortinarius cinnamomeus or fibrillosus.

Tan topped fungi growing in groups in open light forest ground. Young fungi have very whiskery edge around cap but this disappears as fungi grows. Stem + gills yellow. The stem where I held it went quite dark brown and the whole fungi went the same color eventually. Fungi very like illustration in Collins book P. 169 of C. cinnamomeus. However this fungi is not mentioned in Willis's book + the nearest in that is C. fibrillosus.
Glen Nayook 15.4.20.

Maroon Woolly Cap. Strobilomyces floccopus.
Venus Bay area. 25.4.20
Large fungi about 5"-6" across. Cap deep maroon color with bracts with edges turned back giving woolly effect. Underneath yellow pores with caps coming right over the rim. Whole fungi must have been covered with woolly caps. Photographed. (Also P. 4)

Fan Fungi - tiny. Schizophyllum commune?
Tiny - only ½" across greenish above - drying greyish gills cinnomen - drying with perhaps slightly purplish

color. Outside cap with circular markings and then smooth - deep indentation along edge and cap curved under over gills. Growing on bark of eucalypt. Glengarry North 3.5.70.
Cap covered with hairs or fibrils. Gills splitting at very edge. Cap drying white because of hairs.
(Also P.5. this book)

Ghost Fungi. Pleurotus
P. viscidulus - Brown on top + white beneath luminose.
P. nidiformis - White on top - white beneath luminose. Gills of both going down stem. a short way. Glengarry North 3.5.70.
(P.1 this book)

Cigarette Fungi. Clavaria vermicularis. 6.6.70
Growing between layers of bark on big trees down at creek. Fungi white with deep grey tops, ruffled about 6 coming from central base, grooved lengthwise, each fungi app. 1" long tapered

Trumpet Fungi. Pseudohydnum gelatinosum (?)
6.6.70 Whitish grey growing in line down tree bark. Through microscope has hairlike teeth on back. Flesh very tough - opening pointing downwards.

Talk after Mr Fuhrers corrections.

ADDRESS ON FUNGI By Mr. Bruce Fuhrer

Mr. Fuhrer commenced his talk with the fact that interest in Fungi was sometimes created by the fact that most plants are dormant or at least not flowering, when the fungi are prevalent. Plants are still visible even when not flowering but with fungi the "plant", if we can call the main part of the fungi by that name, is hidden and all we see are the fruiting bodies or seed cases. The fungal "plants" exist underground, within wood or in leaves and they continue their efforts, for good or bad, all the year. Special conditions of warmth and moisture are necessary to produce fruiting bodies. The late rains and following cold weather have made this a poor fungi season this autumn. But fungi also appear when the ground commences to warm from the spring weather and we can expect fungi again then. Basidiomycetes tend to make the autumn their main festive season.

Mr. Fuhrer said he would concentrate on the higher fungi; the Basidiomycetes all have spores born on the end of club-shaped structures on the gills, or all over the surface of the coral fungi group. In the group of Basidiomycetes are included mushrooms, toadstools, coral fungi, puff-balls and bracket fungi.

Ascomycetes have spores in asci or sacks. The fertile surface consists of a layer of very small closed tubes, forming bundles of "skittles" and each sack usually containing eight spores but sometimes more. The sacks have the property of rupturing and releasing the spores. The spores are usually held in a fluid. The pressure within the sacks of Cup Fungi has been estimated to be as high as 14 atmospheres and the spores are fired 4 or 5 inches into the air. A Cordiceps, or"vegetable caterpillar", may contain thousands of spores in each ascus.

Mr. Fuhrer then showed slides and gave a very interesting and informative commentary on each. He commenced with the Australian counterpart of the Fly Agaric which is also not edible. It was Amanita pulchella, a delicate orange top with warts covering it and with white gills beneath.

The luminous Pleurotis nidiformis or Ghost Fungi may give off enough light to read newsprint by.

The Lepiota are a group of mushroom-shaped fungi with scaly tops and a ragged ring around the stem.

The Rusula group are extremely brittle in texture and snap when handled. The gills are always close together and neatly arranged. These fungi are probably not palatable to insects as they are usually found whole. Russula emetica is known to induce vomiting if eaten, hence the specific name.

Some insects live part of their life cycle in fungi. Mr. Fuhrer suggested we put some fungi in a plastic bag and see what insects comes out of the fungi.

The specimen of Cortinarius shown was completely red. The gill structure is important in identification. The veil between the edge of the cap and the stem is very fine when the fungi is young. It soon collapses onto the stem leaving coloured fibrils adhering to the stem.

The Honey Fungus is very destructive to forest and orchard trees. The wood affected by this fungus is often luminous when cut. When the fungus has sapped all the goodness from the tree it sends out "bootlaces" which creep underground to another tree.

The genus Lactarius is a group of gilled fungi which produce a flow of white or coloured "milk", depending on the species, when the flesh is broken. Lactarius deliciosus is a large, orange coloured species which grows in association with pines. This species is a popular edible one with Europeans and is cooked alone or prepared with spices to form a kind of chutney.

Some species of Boletus found among pines are edible. They are yellow beneath and brown above. Boletus have pores not gills.

With Coral Fungi the whole surface layer is spore-bearing tissue. The pale brown Coral Fungi - Clavicorona pyxidata- is much branched and has a very peppery taste. The Red Flame Fungi is another of the Coral group and usually grows on heathlands.

Mr. Fuhrer had a delightful slide of the Waterfall Fungi which is relatively rare. There were also Yellow Coral

F

Fungi and the stalactite type coral fungi - Myxomycidium pendulum.

The Leather Fungi are like very thin leathery brackets.

The Polypores are a group of fungi closely related to the gilled fungi, with the gills replaced by pores. They may be fleshy, as with the usual gilled fungi, or they may be tough and leathery, and some are quite hard and woody. Many grow with stems but the most usual bracket fungi belong to this group. A species of polyporus known as Punk was used by the Aborigines to carry fire as it smoldered for a long time.

The Rainbow Fungus is a species of bracket fungi. It looks like a horizontal fan and has its colours in blending bands. On the slide shown the specimens were grey and blue. These fungi are quite destructive and will attack live trees and destroy them. The smallest of the bracket fungi can be as small as 3/8" across.

We then passed into the puff-ball section. The first was Scleroderma flavula, a yellow ball with hard skin. When mature it splits open to expose the spore tissue which is blown out by the wind or rain or is eaten by animals. The Horsedropping Fungi has its spores in plates which are eroded away by wind and rain until the whole is ultimately gone. In the early days this fungi was used to arrest bleeding; the top was cut off and put it on the wound.

Earth Stars distribute their spores by the wind blowing across the opening or the rain dropping on the puff-ball; sometimes it is by direct pressure of animals.

The Lattice Fungi has the spore-bearing tissue embedded in an "egg" or puff-ball case and at naturity the "egg" ruptures and the fungi often comes away with startling force. The spores are in a glutinous liquid which adheres to the lattice part and is distributed as the lattice is blown along the ground.

Mr. Fuhrer showed a very rare phalloid fungus with the centre protuding as a pole. The odour attracts flies and carrion feeding animals who lick off the spores. The spores need to pass through the intestines of an animal before they will germinate.

There was a lovely red and pink starlike fungi from the alpine area which also was very evil smelling and attracted flies.

The Defensive are a group of Small Clovenly Mammals
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The Bathing Pumice is a species of Wooded Fungi.
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Engine Like Off the Ground. The Sleeper Hard
Recipient of an Animal Before Loop with Central

In the Jelly Fungi the clubs are not evenly shaped but rather random shaped. The liquid content is extremely high. There was a white jelly fungus that is almost always on fallen timber. It is one of the earliest groups of fungi to attack dead timber. There is often a series of groups of fungi, each taking its meeds from the dead timber. The colourful Orange Jelly Fungi ~~XXXXXXX~~ grow on dead wood and occasionally on living Banksias.

Mr Fuhrer then showed slides of the Ascomycetes. One group of small yellow discs grew only on sterile material after a fire, another was little balls on stems and others just very tiny orange discs with a beautiful fringe of hairs around the edge.

The Cup Fungi are always beautiful. There was the Brown Cup Fungi growing on muddy ground and the Orange Cup Fungi which can make a hissing sound as the spores rise.

The Paxillus fungi looked like a gilled fungi, when, in reality, it belonged to the pored varieties. What looked like gills were elongated tubes and are different from the gilled fungi in that the edges of the tubes divide once or twice between stem and cap while gills continue in one line.

There were slides of the delightful blue Pixie Parasols that grow at South Cascade; the Blue Tacks with their blue mycellium and the Bird Nest Fungi with their "eggs" in a glutinous liquid so that the "eggs" stick where they land when splashed out of the nest by the rain.

Finally Mr. Fuhrer showed a series of the poisonous Fly Agaric - bright red with white warts - that grow under pines and other introduced trees.

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Ascomycetes have spores in asci or sacks. The fertile surface consists of layers of very small tubes, forming bundles of skittles and each sack usually containing 8 spores but sometimes there may be more. The sacks have the property of rupturing and releasing the spores. The spores are usually held in a fluid. The pressure within the sacks of the Orange Cup Fungi can be as high as XXXXX. 14 lb. per sq. inch and the spores are exploded 4 or 5 inches into the air. A Cordicep is a caterpillar vegetable fungi with a fruiting body consisting of one sac which can contain thousands of spores.

Mr. Fuhrer then showed slides and gave a very interesting and informative commentary on each. He commenced with the Australian counterpart of the Fly Agaric which is also not edible. It was Amenita pulchella, a delicate oranged top with warts covering it and white gills beneath. The remains of the "skirt" was quite visible.

The liminous Pleurotis nidiformis or Ghost Fungi has the peculiar characteristic of splitting down the middle of the gills and not between the gills. One variety of this fungi gives off enough light to read newsprint by.

The Lepiota are a group of mushroom shaped fungi with scaly tops and a ragged ring, which is the remains of the veil, around the stem.

The Rusula group are extremely brittle in texture and snap when handled. The gills are always close together and neatly arranged. These fungi are probably not palatable to insects as they are usually found whole. Years ago this group were used as ametics and made people violently ill for a short while.

There is a class of insects which live their whole life cycle in fungi. Mr. Fuhrer suggested we put some fungi in a plastic bag and see what comes out of the fungi.

The specimen of Cortinarius shown was completely red. The gill structure is important in identification. The veil between the edge of the cap and the stem is very fine when the fungi is young. It soon collapses onto the stem leaving a pale brown stain.

Honey Fungi are very destructive to forest and orchard trees. The wood affected by this fungi is often luminous when cut. When the fungi has sapped all the goodness from the tree it sends out "bootlaces" which creep underground to another tree. Europeans use this fungi for pickles and chutney.

Lacterius fungi are a group that are delicious, according to many cooks. The fungi exude a "milk" where bruised or broken and were imported into Australia with pines.

The Boletus found among pines are edible - they are yellow beneath and brown above. Boletus have pores not gills.

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Mr. Fuhrer had a delightful slide of the Waterfall Coral Fungi which is relatively rare. There were also Yellow Flame Fungi and the Stalactite type coral fungi.

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The Cup Fungi are always beautiful. There was the Brown Cup Fungi growing on muddy ground and the Orange Cup Fungi which can make a hissing sound as the spores rise.

There was a tiny fungi found on animal manure. This fungi discharges its spores uniquely. It consists of tiny little pimples on top of a little pimple-like fungi. In the middle of the tiny pimple is a hole; under the hole is a small "flask" with a smaller opening. As the asci mature on the lining of the flask one asci protrudes through the hole and fires its spores. Then the asci collapses and the next one protrudes and fires. This procedure continues every few seconds while there are mature asci.

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EXCURSION TO SOUTH CASCADE WITH MR. FUHRER. May, 1971.

The day began clear and although there were showers at intervals throughout the day they were not sufficient to dampen the interest of members. There has been much luxuriant growth amongst the undergrowth ferns at South Cascade. In places the track is hidden by this growth, especially of the Hard Water Fern whose fertile fronds were up to 4 ft. high. Unfortunately the blackberries have also extended and the track out is almost blocked by them. However this was an excursion to find fungi and Mr. Fuhrer was very patient with the many questions and he bore with my ignorance with great calm.

From the point of view of fungi seen, I ~~flet~~ felt the excursion was a great success, with many different fungi being observed and photographed. The 14 members present enjoyed the warmth of the fire lit and maintained by our president; but the aroma of his barbecued chops made everybody hungry at lunch time.

The fungi are recorded below in the order they were found. Collected on the way up to South Cascade was the light tan coloured Paxillis involutus with its "gill-like" pores dividing twice from stipe to edge of the cap.

Mycena graculenta (?) was a tiny red fungi with a stipe that had been sticky, the gills of this fungi and its stipe were also red.

At South Cascade Laccaria laccata was seen. It is a cinnamon coloured fungi with cap and gills both the same colour. Some specimens had cinnamon warts on the top while others were almost smooth.

There was a specimen of the Hydnum species with its spines or "teeth" on the underneath side.

The beautiful,fragile, blue Pixie's Parasol - Mycena interrupta- is found each year at South Cascade. This fungi is a charming picture with its cap darker blue at the centre and paler blue towards the edge.

The specimen of Leptonia was entirely tan in color and according to Mr. Fuhrer had deeper gills than other species.

The dark red Cortinarius showed where its thin veil had collapsed by a darker ring on the stipe or stem.

A delightful pale yellowish Mycena epipterygia with its bright yellow stipe and white gills attracted everybody including artist and photographer. It is reported to have the smell of cucumber but perhaps our specimens were either not large enough or dry enough.

The pale reddish Coltrichia laeta (?) was a hard bracket fungi with pores on the underside.

The yellow Scleroderma flavida was found. This fungi is an almost round ball attached at the base. When mature it opens and exposes the spores in a mucus or the whole is just eroded away.

Many Flammula fungi were seen. They were a golden brown and varied from small to about 2" across although Mr. Fuhrer says they can be larger.

The fungi with the cream woolly cap appearance on the top was Psilocybe asperosporus. This has purplish-black gills with the edge of the gills patterned when seen under magnification.

The long "threads" of the Horsehair Fungi - Marasmius equicrinis - was to be seen everywhere. Members were surprised to realise they had a very fine fruiting body at the end.

There were many forms of disco-mycetes, these were tiny flat discs growing on various hosts and of white, orange or yellow coloring. There was even a brown form on the plant Cotula repens.

The Clitocybe paraditopia was ash-coloured with slightly jelly-like or watery appearance. Not very spectacular.

A very delicate pale pink, much branched coral fungi was Clavaria gracilis (?) I think.

A small gilled bracket fungi that was quite common on many plants was a Crepitodus. It was cream and only about 3/4" across; but it was easy to see the characteristic woolly surface near the base.

A small Boletus was found that was being attacked by a mould.

The tan coloured Lactarius subdulcis exuded a "milk" from its gills where it had been slightly crushed in picking.

A lovely picture was made by a group of the flesh

coloured bracket fungi belonging to the Pleurotus species. They appeared very shiny or watery on top. I t could perhaps have been Pleurotis viscidulus (?).

Only one Russula was found. This had pinkish cap.

There was one area where many simple orange coral fungi grew and on closer inspection also Black Earth Tongues standing about 2½" high. They belonged to the Geoglossum.

There was one type of puffball that we all found fascinating. It was less than ½" across the ball which was raised on a network of latice-like fibres in the shape of a tapering skirt. The ball was very resilient and puffed white spores quite visibly when squeezed. I think its name was Calastoma rodwayii (?).

We found one species of the genus Fomes, the very hard tough dark-coloured bracket fungi often referred to as punk.

Stereum fasiatum (?) was one of the bracket fungi with bands of different but blending colours and wavy edges. This one was in orange and brown colouring.

Another spectacular specimen was Cortinarius rotundisporus with its beautiful deep blue viscus cap and almost purplish blue gills and white stalk. It gets its name from the shape of its spores.

The greenish-grey Oyster Fungi - Pleurotus ostreatus - was more attractive from underneath as its gills were edges with white. In fact our specimens looked like a pair of ears.

The final fungi on the list is Mycena vinacea a beautiful small fungi about ½" or so across and the whole a lovely rose colour. There was a large colony of these fungi on a log at the car park.

I have gone into some detail with these fungi because of the lack of reference material available and the names are as accurate as I can get them. Some with (?) after their names I have not been able to check.

1971 Aug. 21st Mr Willis showed us the cup fungi that only grows on the bare seed covers on the Banksia cones. Photographed.

1971 Aug 28th - Sept 3 Orange Balls found in Grampians. little balls about ¼ - ½" across in the bank amongst the soil, not growing on top of soil. When one was cut open it contained wall-like divisions in a fluted or fancy pattern - very pretty.

Distorted Fungi found in Grampians. Appeared to be mushroom type fungi but with pores(?) and the cap bent back so as to be touching ( ). Most unusual. Cap about 1" at most across, flat. Pale orange to white.

1971 Sept 19th Brain Fungi found at Dead Horse Gully on side where Sun Orchids grow at road level. large one stood 4" high and was quite magnificent. Stood on flesh coloured stem about 1½" long and ½" wide, grooved up about ½" from soil level. Cap very deeply, irregularly folded but whole tending towards a point. Dark reddish brown colour with velvety appearance. Cap not fitting tightly to stem and underneath surface visible, similar colour to stem + much the same texture (Looks like inside of cup fungi) Cap appears to be hollow inside except for ridges from folds. Could it be GYROMITRA ESCULENTA.

5th May Miss Galbraith showed us a peculiar fungi. It was shaped like a mushroom and about 2½" across but had pores instead of gills. It had a base to the stalk that looked like a caterpillar so we thought it may(?) be a cordycepts. It was a lovely brown on top & white underneath but when touched the underneath went blood red. Mr Willis identified it as Amauroderma rude which commonly grows under or on the roots of wattle trees.

It is not a cordycept but belongs to the family of Polyporus.

1989 August 20th. In ~~Mr~~ private block up near Quarry Reserve T'gon Sih a fungi that looked like a kind of slime mould. The main body was clear jelly-like that held its shape. The outer coating looked as if it consisted of hard white bubbles. It did not cover the whole "jelly". It was on bracken stalks & leaves.

Nearby was another specimen with very little clear jelly and a lot of the harder coating. This one was on live lomandra leaves in a real clump. We brought some of both specimens home & photographed them. By the 24th the white specimen had turned a reddish brown colour. By 25th it had turned black. The "jelly" part had shrunk just leaving the harder part.

1997 May - July. Field Mushrooms came up before any rain after a dry autumn. They were lovely to eat because they were dry. After rain about a fortnight later we had another crop. In both cases we had both the white-topped & brown-topped. There continued to mushrooms, though not so plentiful until 2nd July though enough for a feed occasionally. Wendy Savage bought two big icecream containers of mushrooms for members at the June meeting 27/6/97 so there were still many at Trafalgar.

1997 July 3rd Rooting Shank - Oudemansiella radicata growing on top side of track before we get to the trees from the front gate. Reported to Tom May.

Taken from " FUNGI, An Introduction " 1966

by Lilian E. Hawker, Professor of Mycology, Uni of Bristol

This little book is pretty technical and begins with the very basics. The Lower Fungi. Ascomycetes. It is the only ref that I can find to Paecilomycetes. The par begins

Family (1) Gymnoascaceae.

This family contains forms with very simple ascocarps (spore containers) some of which develop as a result of a fusion between male and female gametangia (sex organs), others parthenogenetically ? The asci are globose and usually eight spored.

The simplest member is Byssochlamys, in which the asci are produced in clusters with no surrounding pteridium (the membrane usually of at least two layers, that surrounds the fruit body of a gasteromycete (stomach fungi), thus differing from the Endomycetales mainly in the presence of the secondary ascus-bearing mycelium or ascogenous hyphae (mycelium(. B. fulva, a cause of spoilage of canned fruit, further resembles some members of the Endomycetales, such as Eremascus, in its habitat and ability to grow on acid or sugarymedia. It produces conidia in long chains formed from a cluster or "penicillus" of elongated phialides? (placed in the form genus PAECILOMYCES) The ascospores are usually resistant to heat and hence the most resistant ones are liable to survive the process of fruit canning. A slight increase in the degree of heating is sufficient to destroy all the spores and thus prevent spoilage.

(This is the merest mention of Paecilomyces in discussing others.)

In "Lower Plants of the World " Boedjin. 1965. there is mention of the Gymnoascaceae. "Most Gymno. are soil-inhabiting saprobes and feed on refuse and all sorts of animal matter; some have become parasitic and cause various troublesome skin diseases in man ".

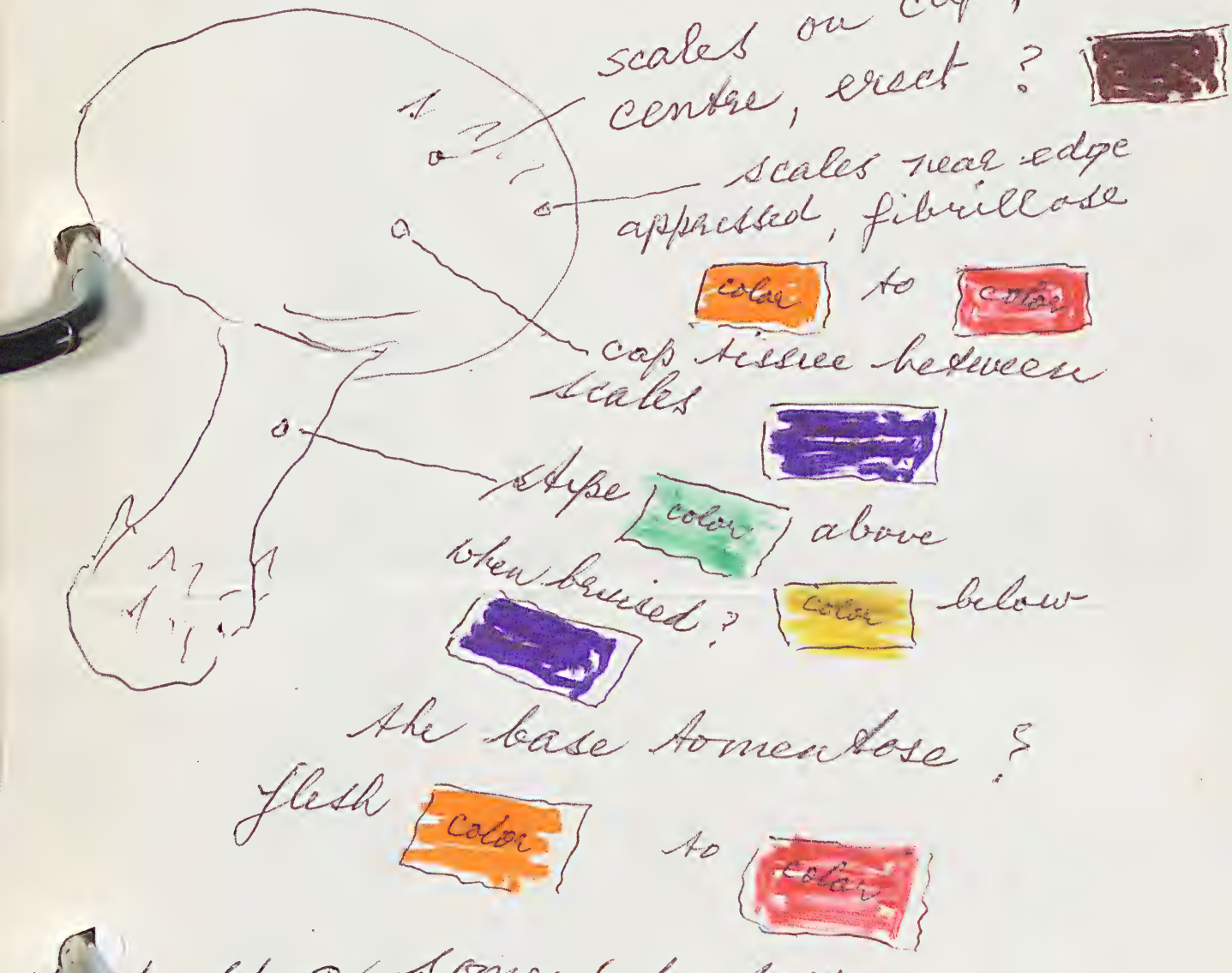
(There seems to be millions of the lowest Lower Fungi and general writers on fungi cannot include details on any particular one.)

One needs the library of a Monash or a Latrobe. E.L.

Few specialist writers include a glossary.

The Gymnoascaceae, thankfully, are said to be a small family !!

Describing the fresh fungus for the expert, with colored pencils



This is a somewhat tall order but would please all mycologists

Got the idea — how!

plywood or cardboard, aluminum painted inside

sortie de l'air chaud, mouillé (heated, moist air)

cheminée

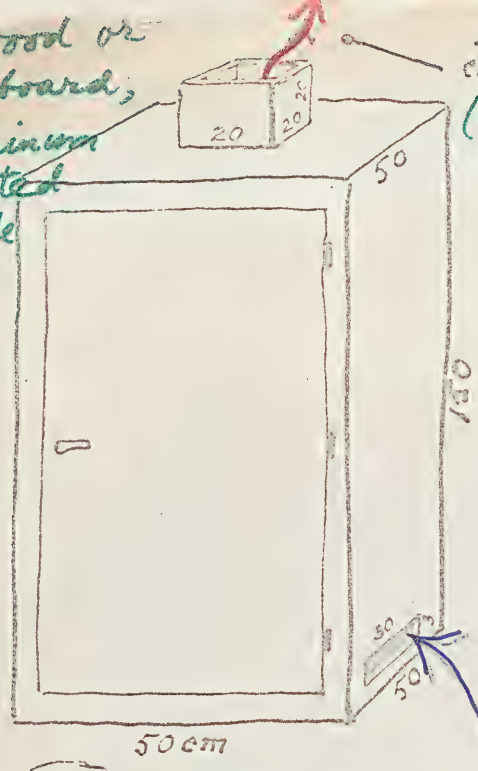


fig. 1. séchoir fermé

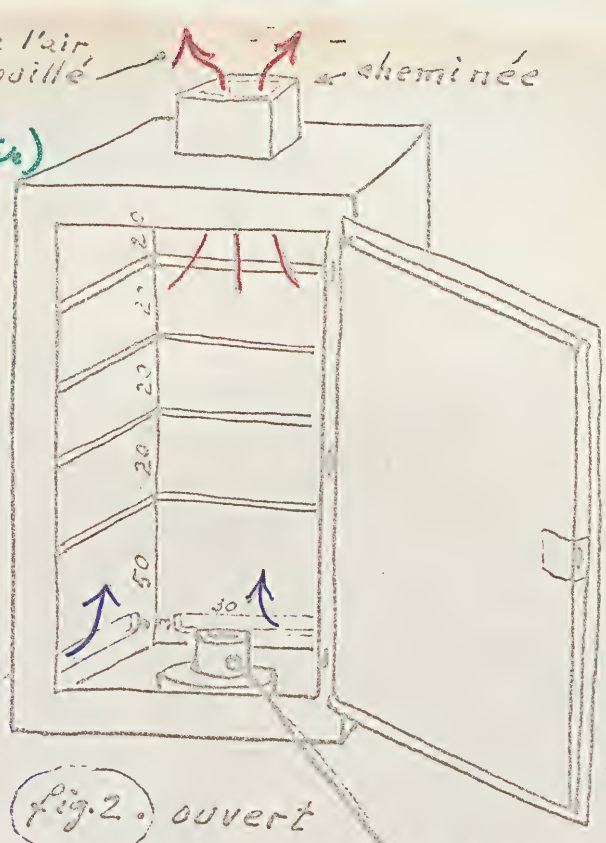


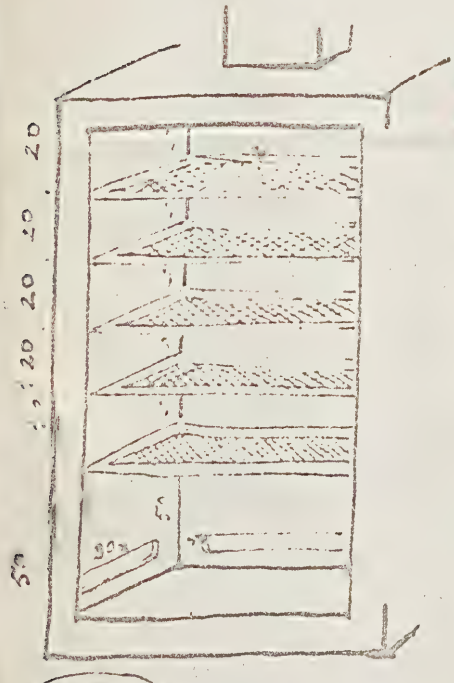
fig. 2. ouvert

entrée de l'air frais (fresh air)

kerosene burner (blue flame) widely used in India but 2 or 3 60 Watt bulbs may do the same job

réchaud à pétrole, brûle 8 heures

fig. 3.



heat inside should not exceed 50° Celsius

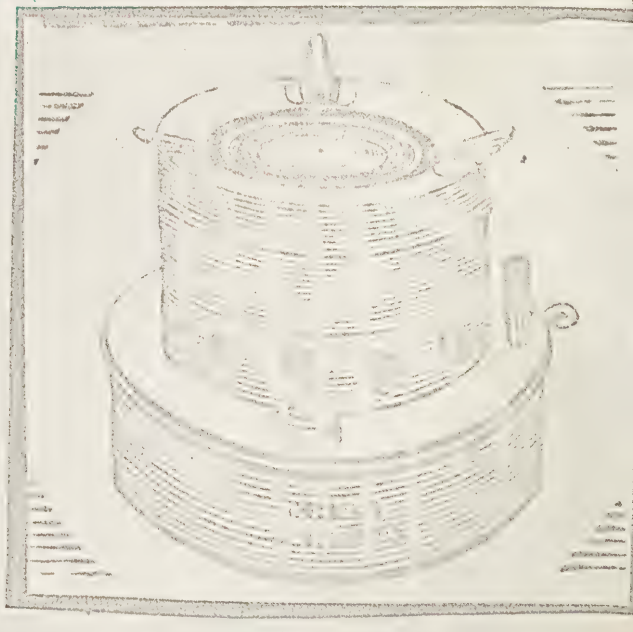
la température à l'intérieur du séchoir fermé n'est pas permis de dépasser 50° C !!

—

il est recommandé de peindre tout l'intérieur blanc ou, mieux, à aluminium

—

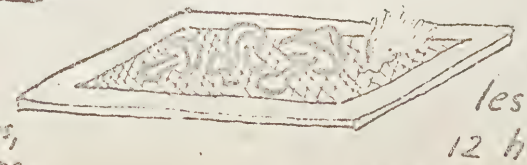
fig. 4. les tiroirs à étoile de fer



jamais utiliser le gazoline, benzine, etc., trop inflammable, trop cher.

fauxe wire tray

fig. 5



on laisse dessécher les champignons (4-) 8-12 heures selon leurs grandeur et ténacité de retenir de l'eau.

apres la dessiccation des champignons, on attend jusqu'ils ont perdu leur fragilité, et les enroule dans une pièce de papier journal et les met dans un sac de plastic bien fermé.

Gahnia clarkei Tall Saw-sedge

1995 Apr 12th Growing in Darwin Water Reserve.

Cahnia filum Chaffy Saw-sedge

1993 Feb 26th. Plants growing in wet area along ~~boardwalk~~ boardwalk to Shallow Inlet. Plant quite large and yellowish green. Fruits were dried but panicle was very congested.

1996 Oct 12th Plants growing at Paradise Beach at 2nd pipeline in N.P.

Gahnia radula — Red-fruited Saw-sedge.

1994 Nov 26th Growing in APM block Stradbroke Sth. Gipp. Hwy
Oct 28th " " T'gon Sth Reserve.
1995 Apr 12th " " Drouin Water Reserve.
Nov 12th " " Railway Reserve near Traralgon.
1997 Jun 18th " " Mt Nugong.
2000 Dec 3rd " " Sweetwater Ck. Reserve.
2001 Aug 27th " " Newtonmeigh bush.
Dec 1 " " " " Sandy Ck.
2004 Apr 3 " " Colley's Rd Block.
2006 Sept 30 " " Seneris Track
Nov 4th " " Springsure area

Gahnia sieberiana Red-fruit Saw-sedge.

1993	Jan.	Growing	in	Errinundra & Combienbar areas.
1994	Nov 26	"	"	APM block Stradbroke Sth. Gipp. Hway.
	Oct 28	"	"	T'gon Sth Reserve.
1995	Apr 12th	"	"	Drouin Water Reserve.
1996.	Oct 12th	"	"	Paradise Beach at 2nd pipeline in N.P.
2000	Dec 3rd	"	"	Sweetwater Ck. Reserve.
2006	Sept 30th	"	"	Senenis Track.

Gahnia subaequiglumis Bog Saw-sedge.

1993 Jan 3rd Plants growing on roadside in Errinundra area. Identified by James Turner. No description of this species in books I have but will be in Vol. 4 of Flora of N.S.W. later this year.

1994 Nov 7 Collected specimens on Nicola weekend. Plant with typical Gahnia leaves, scabrous, longer than inflorescence. Sheaths dull brown; inflorescence in our specimen very short with only 1 clump of florets. Area where flower is on terete culm has two long leaf-like bracts - one 10" long the other 6" long. Flower almost sessile with what appears to be 2 glumes - straw coloured - uppermost short & darker. One glume 1.5 cm the other 6 cm.

1994 Nov 9th Recorded for Nicola weekend

Cahnia trifida Coast Saw-sedge

1993 Feb 26th Plants growing on shore at Red Bluff at Corner Inlet.

1996 Oct 12th Plants growing at Paradise Beach at 2nd pipeline in N.P.

1999 Oct 25th " " " Cullen's Run.

Galenia pubescens Blanket Weed.

2007 May 13 Max brought specimen weed from his garden.
To get to AIZOACEAE in key to Families perianth absent or of 1 whorl, obviously the last, then perianth corolla-like; stamens less than 12, ovary superior, perianth not zygomorphic, with 5 segments free; stipules absent, flowers solitary, receptacle short not a spike of achenes, perianth tubular.
In key to AIZOACEAE :- flowers without petaloid stamens, leaves alternate or clustered, fruit a capsule, plants covered with hairs, leaves hardly succulent.

Galenia.

Plant has long arms of procumbent branches, short side branches widly spaced on one side only. leaves greyish from dense covering of hairs, slightly folded, obovate-spathulate. Perianth segments white ± pink inside, very hairy outside.
Excellent photo on CD rom.
Capsule round opening from top into 5 segments.

* Galium aparine Cleavers or Goosegrass

1993 Feb. 16th Flowering down near the creek on our property. These plants were very weak compared with the ones along the ~~roo~~ road or in the garden but I cannot key it out to anything else. This plant had a central 'branch' with side branches coming off. length of main branch about 1m long. Flowers in threes on stalks, axillary, pinkish white. leaves + stipules mostly about 6 to a whorl. but some more + some less. Plant very prickely just like garden plant. leaves appr. 1cm long. Got better specimen + decided above was not G. aparina

1995 Feb. 19th G. aparina growing along Downies Lane + flowering.

1994 Oct 30 Recorded for Dawson R'way Reserve
1995 Apr 12th " " Drouin Water "
2000 Apr 11th " " Heyfield WetLand.

Galium australe — Tangled Bed-straw

1972 Jan 30th Flowering at Mt Howitt.

1981 Nov 24 Plant in fruit at Lots 54 & 54 at T'gon Sth.
Fruit with hooked bristles (kidney shaped)
leaves 4's with hairs on teeth on margins.

*

Galium divaricatum — Slender Bed-straw

1993 Feb 17th Plant flowering down near creek on our property. Growth habit very slender, although wiry very thin and flowering parts extremely small. Flowers reddish but so tiny we needed the microscope to see them. Flora of N.S.W says flowers are 1mm. leaves in varying numbers in whorls from 5 to 7. leaves with curved stiff hairs on margins, 1 cm long with point at apex that is almost transparent. Fruit very tiny like two balls joined together. Book says fruit has finely papillose surface. A number of flowers in each group. G. parisiense in Willis is now under this species. Stems square with hooked hairs so that it has a similar feel to G. aparine. Internodes on main stem 4-5 cm and even in new growth the whorls of leaves are distant.

1994 Oct 30 Growing in Dawson Water Reserve.

Cialium gaudichaudii Rough Bedstraw.

1970 Jan 25th Flowering at Wild Dog Creek, Wulgulmerang.

Galium propinquum Maori Bedstraw.

1969 Oct 4th Flowering at Cowwarr. Flowers on long stalks - very small. Leaves in circles. Glabrous. Leaves circles widely spaced along stem. Whole thing too small to photograph unless under microscope.

1970. Jan 25th. Flowering at the Cobberas.

1971 Jan 17th " at Mt Useful.

Jan 30 " at Howitt Springs

1995 Nov 19th " at Clarkes Road

2003 June In 1st ed. " Census this plant as per Willis is other G. propinquum or G. ciliare.

Gamochaeta purpurea

* Cinaphalium (purpureum) coarctatum Purple Cudweed.

1944 May 1 Growing on Austen's property near Darlamurla. Herb, basal leaves in rosette, spathulate, apex obtuse, upper surface green & ± glabrous, lower surface white tomentose. Heads in auxiliary clusters. Involucre bracts green low ones, upper pale & scarious, purple in between.

2003 June Name change in 7th ed. of Census

* Gamochaeta purpurea

(Gnaphalium spicatum). Spiked Cudweed.

1988 Nov 3. Collected at Wirilda. Plant 6" high with some basal leaves & alternate leaves up stem widely spaced. Leaves glaberous above, cottony white below. Stem cottony white. Much of the investiture pressed to stem or under leaf..

Flower a spike with flowers close together with bronze involucre & phyllaries oval topped with bronze almost transparent tips, incurved.

Flowers in clusters of 5 (mostly), each cluster subtended by leaf-like bract. A few flower clusters down stem at base of leaves. Illustration in "Plants of Western N.S.W".

1994 Oct 30 Plants growing in Dawson R'way Reserve

1995 Oct/Nov 19 " " " Railway line Reserve Tigon

1996 Dec " " " Early Road, Moe.

2001 Dec " " " Sandy Ck Bush Newborough

Gamochaeta purpurea.

*(Cinaphalium purpureum) Purple Cudweed

1987 Sept 24th Flowering at 4-mile Creek. leaves 3-4" long & 1½" broad at tip with teeth on leaves. Upper surface glaberous & flower lower than leaves.

Sent specimen to Dr Parson's Good Illustration in 'Weeds of Forest, Roadsides & Gardens" by C.F.L.

See also p. 2.

Gastrodia procera

2000 Dec 3rd Flowering at Sweetwater Ck. Reserve. No. of flowers less ~~than~~ more than 20 plant ~~robust~~ robust ~~stemmed~~ stemmed and labellum more visible as "flaps" folded further back. Only lower flowers really open at this stage. Probably plant described under G. sessamoides.

2001 July 11th After checking Pictorial Guide to Wild Orchids of Vic I think Slides 1135/6 are G. procera.

Gastrodia Sesamoides — Cinnamon Bells

1966 Nov 15th Flowering at Dead Horse Gully.
Flower:- Brown outside, cream at tips + inside.
Scape:- 15" inches.
Dorsal Sepal; Lateral Petals + Lateral Sepals. all joined at base and 2/3 up bell. After that they diverge without turning back. Sepals all same size, lateral petals slightly smaller. Flower grows upside down.
Labellum:- 2 rows of yellow calli with a ridge between. Calli commence at 2 big calli (yellow) at base. and unite midway down labellum to tip. Edge of labellum turned up and dilated at base 2/3 from tip, also toothed.
Column:- Grooved, broad, white, as long as labellumn. Blunt at apex. Slightly winged. Pointing straight out of flower.
Ovary:- 1.5" cm
Flower stem:- 1.5" cm
leaf :- no leaf.
Stem bracts:- 2 stem clasping.
Flower bracts:- 1 for each flower, long as stem of flower. 1.5" cm
1967 Dec 23rd Flowering at Morwell National Park
Native wasp yellow banded abdomen was interested in flower.
1968 Nov 17th Flowering at Dead Horse Gully
Dec 22nd " right in park - Morwell Nat Park
29th " on way home from Walhalla.
1969 Nov 8th " at Wilson's Prom.
1970 Jan 1st Plants in bud at Tambaritha Saddle.
1972 Jan 30th Flowering at Mt Howitt.
1973 July 16th Buds about 9" above the ground.
2001 July 11th After checking Pictorial Guide to Wild Orchids of Vic. I think slides 740/1 + 4919 + 4920 are this species

2000 Dec 3rd This plant is smaller, finer, shorter than S. praecera. Flowers less than 20 & labellum much more hidden than in S. praecera. Still plants we saw had finished flowering. So apparently this species flowers first in this area.

Gaultheria adpressa.

1970 Jan 2nd Miss Galbraith says this plant used to be G. hispida, but now a different species. Plant in bud. Hairs pressed against stem. Leaves toothed & conspicuously net veined. Quite large leaves about 1½" long.

1971 Jan 30th Mrs. Morrison reports he found this plant at Mr. Howitt.

1973 Mch 17th Plants carrying large white berries growing near Lake Tali Khan.
Also growing at Billy Boy Creek on Thompson Valley road.

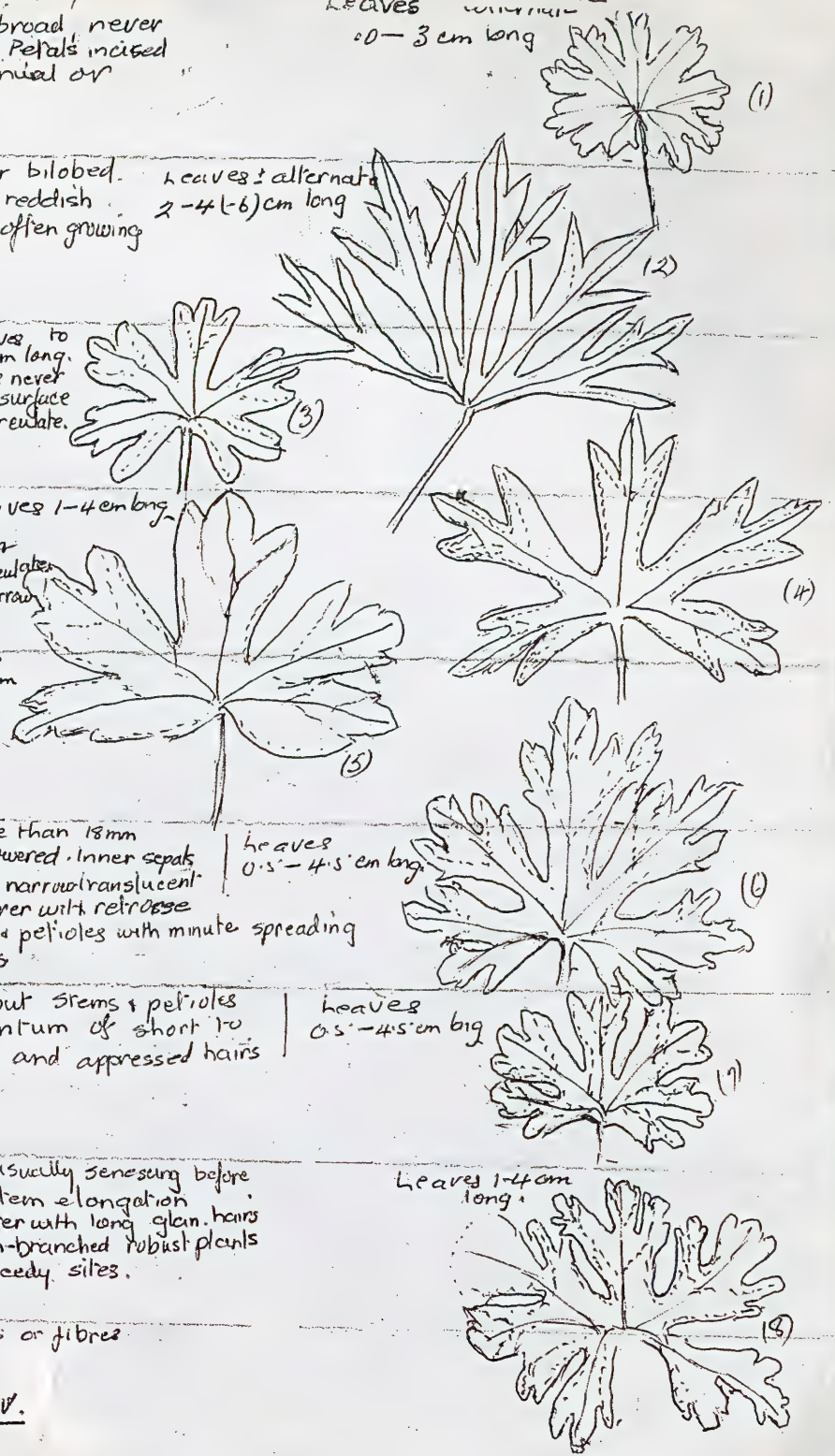
1983 Dec 4th Plants in flower with tiny cream bells. Growing on road to Mt Howitt.

1993 Jan 31. Plants growing in Errinundra N.P.

1997 Jan 19th " " Mt Nugong.

2005 " 24 Members brought back specimen from the Errinundra weekend. This specimen had fruit at a late stage where berry was no longer present & capsule was left. — a five segment fruit with calyx leaves still present.

			GERANIUMS	Differences in key	
* G. molle	Flowers paired Peduncle 1-4cm. Pedicle 2-4" Pink magenta.	Stems 10.50cm short spreading glandular hairs & eglandular hairs.	Sepals ovate to elliptic 4-5mm long, villous with short glandular or eglandular hairs. mucro absent or 0.5mm.	~~Basal~~ Leaf-lobes broad, never narrow linear. Petals incised or bilobed, Annual or biennial.	Leaves alternate 0-3 cm long
G. dissectum *	Flowers paired Peduncle 1-5cm Pedicles 0.8-1.5cm Rose magenta.	Stems hairs retorse to L eglandular & L glandular hairs	Sepals ovate to lanceolate 5-8mm long, pilose with long glan. or eglan. hairs - mucro 1.5mm long.	Petals incised or bilobed. Stipules usually reddish. Garden escape often growing in wasteland.	Leaves ± alternate 2-4(-6)cm long
G. sp. 2	Solitary or paired Peduncles 0.7-3.6cm Pedicle 0.7-1.7" Pale Pink to white	Stems - hairs short or long recurved, sparse to dense.	Sepals ovate to elliptic 3.5mm long acute, pubescent with minute glan. or eglan. hairs & scattered long curved to spreading hairs mucro to 0.5mm	Petals never deeply incised or bilobed. Stipules never reddish. Upper surface of leaves not tuberculate.	Leaves to 4 cm long.
G. sp. 4	Solitary or paired Peduncles 0.5-2.7cm Pedicles 0.5-1.6cm Bright pink at apex grading to white.	Stems hairs hispid, short recurved to spreading	Sepals narrow-ovate 3.5-4mm long, acute becoming broad in fruit, pubescent as above G. sp. 2. mucro 0.5-1mm.	Petals as above sp. 2 except upper surface of leaves & stems often tuberculate. Margins of sepals narrow white to translucent. never hyaline.	Leaves 1-4cm long
G. homeanum	Solitary or paired Peduncle 1.7-2.8cm Pedicle 1.5-2.5" Bright pink at apex grading to white	Stems, with sparse, coarse, recurved to retrorse.	Sepals elliptic to obovate 3-3.5mm long, obtuse, glabrescent or with tiny glan. and appressed eglan-hairs, some longer. mucro 1-1.5mm.	Inner sepals with broad hyaline margins. Sepals usually reflexed in spent fruit.	Leaves 1-4.5cm long.
G. potentilloides var. 1.	Solitary - rarely paired. Peduncle 0-3.5cm Pedicle 1-3.5" Pale pink	Stems pubescent with tiny curved hairs.	Sepals 3.5-4mm long. pubescent with longer hairs towards base & margins.	Flowers never more than 18mm diam, always 1 flowered. Inner sepals sometimes with narrow translucent margins but never with retrorse apices. Stems & petioles with minute spreading & recurved hairs	Leaves 0.5-4.5cm long.
G. potentilloides var potentilloides	Solitary - rarely paired Peduncle 0-3.5cm Pedicle 1-3.5cm Pale to mid-pink	Stems sometimes rooting at nodes, recurved to appressed hairs	Sepals 4.5-5mm long outer surfaces pubescent, mucro. 1mm	As above. but stems & petioles with indumentum of short to long recurved and appressed hairs	Leaves 0.5-4.5cm long
G. sp. 5	Solitary or paired Peduncle 1-4.5cm. Pedicle 0.8-2.2cm Pink to bright pink.	Stems glabrous or with minute retrorsely appressed hairs.	Sepals ovate 5-6mm long, acute becoming broad in fruit, pubescent with short subappressed hairs & some longer spreading hairs. mucro 1mm.	Basal leaves usually senescing before or during stem elongation. Pedicles never with long glan. hairs. Usually much-branched robust plants of damp, weedy sites.	Leaves 1-4cm long.

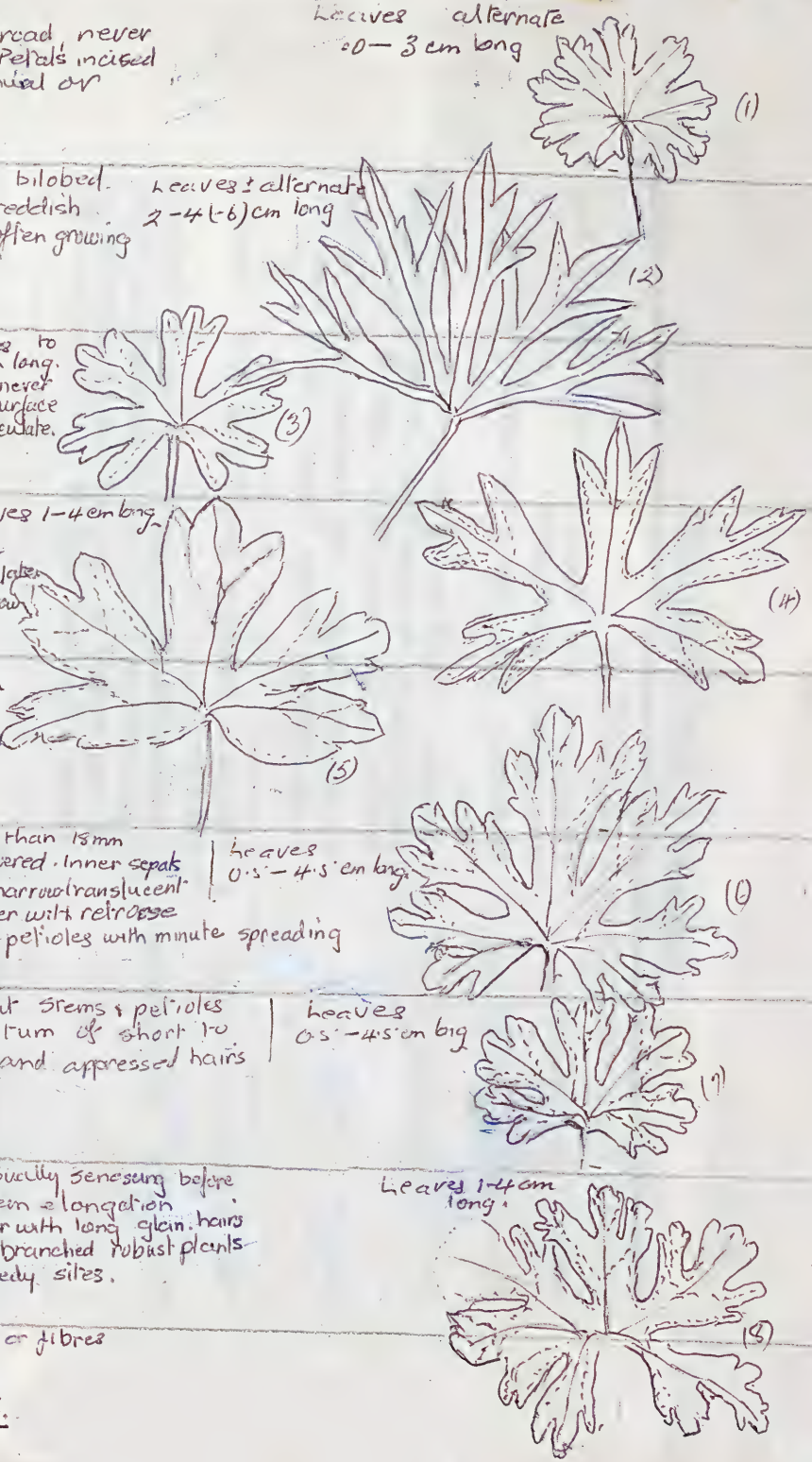


L right-angular.
retrorse - backwards & downwards
glan - glandular
eglan - eglandular.
incised - cut deeply

Hyaline - delicately membranous & colourless with no granules or fibres
Translucent - semi transparent.

GERANIUM SPECIES LIKELY IN L.V.

* G. molle	Flowers paired Peduncle 1-4cm. Pedicle 2-4" Pink magenta.	Stems to 50cm short spreading glandular hairs & eglandular hairs.	GERANIUMS. Sepals ovate to elliptic 4-5mm long, villous with short glandular or eglandular hairs. mucro absent or 0.5mm.	Differences in key. ~~Basal~~ Leaf-lobes broad, never narrow linear. Petals incised or bilobed, Annual or biennial.	Leaves alternate 0-3 cm long
G. dissectum * 2)	Flowers paired Peduncle 1-5cm Pedicles 0.8-1.5cm Rose magenta.	Stems hairs retorse to L eglandular & L glandular hairs to wh	Sepals ovate to lanceolate 5-8mm long, pilose with long glan. or eglan. hairs - mucro 1.5mm long.	Petals incised or bilobed. Stipules usually reddish. Garden escape often growing in wasteland.	Leaves ± alternate 2-4(-6)cm long
G. sp. 2 3)	Solitary or paired Peduncles 0.7-3.6cm Pedicle 0.7-1.7" Pale Pink to white	Stems - hairs short or long recurved, sparse to dense.	Sepals ovate to elliptic 3.5mm long acute, pubescent with minute glan. or eglan. hairs & scattered long curved to spreading hairs mucro to 0.5mm	Petals never deeply incised or bilobed. Stipules never reddish. Upper surface of leaves not tuberculate.	Leaves to 4 cm long.
G. sp. 4 4)	Solitary or paired Peduncles 0.5-2.7cm Pedicles 0.5-1.6cm Bright pink at apex grading to white.	Stems hairs hispid, short recurved to spreading	Sepals narrow-ovate 3.5-4mm long, acute, becoming broad in fruit, pubescent as above G. sp. 2. mucro 0.5-1mm.	Petals as above sp. 2. except upper surface of leaves & stems often tuberculate. Margins of sepals narrow white to translucent. never hyaline.	Leaves 1-4cm long.
G. homeanum 5)	Solitary or paired Peduncle 1.7-2.8cm Pedicle 1.5-2.5" Bright pink at apex grading to white	Stems, with sparse, coarse, recurved to retrorse.	Sepals elliptic to obovate 3-3.5mm long, obtuse, glabrescent or with tiny glan. and appressed eglan. hairs, some longer. mucro 1-1.5mm.	Inner sepals with broad hyaline margins. Sepals usually reflexed in spent fruit.	Leaves 1-4.5cm long.
G. potentilloides var. i. 6)	Solitary - rarely paired. Peduncle 0-3.5cm Pedicle 1-3.5" Pale pink	Stems pubescent with tiny curved hairs.	Sepals 3.5-4mm long. pubescent with longer hairs towards base & margins.	Flowers never more than 18mm diam, always 1 flowered. Inner sepals sometimes with narrow translucent margins, but never with retrorse apices. Stems & petioles with minute spreading & recurved hairs	Leaves 0.5-4.5cm long.
G. potentilloides var potentilloides 7)	Solitary - rarely paired Peduncle 0-3.5cm Pedicle 1-3.5cm Pale to mid-pink	Stems sometimes rooting at nodes, recurved to appressed hairs	Sepals 4.5-5mm long outer surfaces pubescent, mucro. 1mm	As above. but stems & petioles with indumentum of short to long recurved and appressed hairs	Leaves 0.5-4.5cm big
G. sp. 5 8)	Solitary or paired Peduncle 1-4.5cm Pedicle 0.8-2.2cm Pink to bright pink.	Stems glabrous or with minute retrorsely appressed hairs.	Sepals ovate 5-6mm long, acute becoming broad in fruit, pubescent with short subappressed hairs & some longer spreading hairs. mucro 1mm.	Basal leaves usually senescing before or during stem elongation. Pedicles never with long glan. hairs. Usually much-branched robust plants of damp, weedy sites.	Leaves 1-4cm long.



L right-angular.
retrorse - backwards & downwards
glan - glandular
eglan - eglandular.
incised - cut deeply.

Hyaline - delicately membranous & colourless with no granules or fibres
Translucent - semi-transparent.

GERANIUM SPECIES LIKELY IN L.V.

Cieranium antrorsum

1970 Jan 2nd Flowering at Tamboritha Saddle Small ½" red flower. Miss Galbraith identified by fact that hairs on stems pointed upwards. lovely bright purple-red flowers. Flowers almost sessile.

1971 Jan 30 Flowering at Howitt Springs

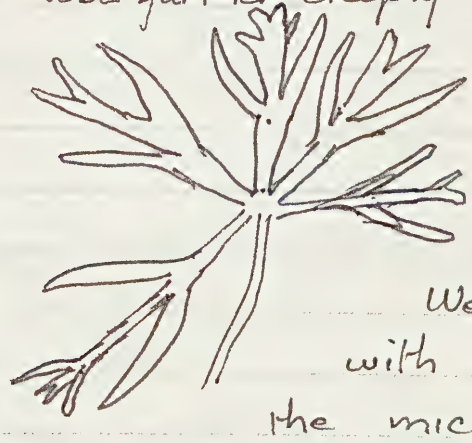
1974 Dec 7th " " Tamboritha. Bennison Plains

1995 Jan 12th " on Dargo weekend.

1996 Jan 20th " " Hotham weekend.

* Geranium dissectum Cut-leaf Crane's-bill

1988 Nov 12th Dad collected specimens from down near creek. Flowers deep pink to magenta with notched petals, twinned on short stalks after leaving main stem. Plants hairy with long silver hairs. leaves very deeply dissected to stem with each lobe further deeply dissected.



Dr Willis says hairs near top part of flowering pedicel & on awns of mericarps are glandular. We could not see the glands with the eye piece but under the microscope the glands were tiny and clear but they were there. They were like tiny drops of glistening water. Good illustration on p. 135 "The Wild Flowers of Britain & Northern Europe".

After collecting more specimens we could see the glands more easily at the base of the calyx.

Fruits are light brown, circular, very hairy. Seed almost black closely, regularly patterned, pitted.

1994 Dec 19th Flowering down near the creek at home.
1996 Dec " on Traralgon Sth. roadside.
2005 Oct. 18 " in our garden.

Geranium homeanum Northern Cranesbill

2003 Mch. Recorded at Eel Hole Ck/Cemetery Conservation Reserve in Management Plan

This species is only recorded for 2 in Willis.

Cieranium neglectum Red-Stem Crane's-bill.

1993 Jan 31. Plants flowering in marshy area in Errinundra N.P. Flowers are about 1" across on pedicels that are quite long - upto 10cm - and so are far away from the leaves. Flowers are whitish with some fine red lines. Red-stem is not obvious on flowerpedicels but we found part of a plant where leaves, stems, everything were a deep red but were probably mature & ready to dry. Dad photographed. Flowers are singly.

Cieranium potentilloides

1972 Jan 30th Flowering at Mt Howitt.

1987 Feb 3. Cut. leaf, flowers pale pink to white but singly. pedicle-peduncle loosely + retorsely hairy 2-5 cm long. Flowering Yallourn Nth near George Bates oral.

1993 Jan 30 Flowering in Errinundra N.P.

1994 Jan 15th " " Mt Erica

1994 Oct 25th Sorted out G. potentilloides from G. solanderi by the roots. The latter has turnip-like roots while this species does not.

Oct 30 ~~Ridge~~ Recorded in Dawson R'way Reserve.

1995 Jan 15th " for Dargo weekend.

1996 Jan 20th " " Hotham "

1997 Apr 5th Plants with seeds growing in APM Reserve — Grand Ridge Road.

1999 Jan 23rd Plants growing on Gelantipy weekend. Identified from specimens brought back.

2004 Apr 3 Growing on Colley's Rd Block.

Geranium ~~Sp. 3.~~ retrorsum S 53

Dawson Railway Station Reserve

Grassland.

Collected 2nd October 2004 by

Bon Thompson Specimen No. 232

Det: J.C. Reid 3 March 2005

Geranium retrorsum — Crane's-bill

1988 Nov 15th Collected specimen near ~~the~~ our gateway on Downie's lane.

Hairs on pedicle turned right back flat against the pedicle. Hairs further down plant turned back but not appressed. Leaves dissected almost to centre; 5 lobed with each lobe 3 lobed to a point with sometimes an extra lobe on two outside big lobes. Leaves with gap – not circular.

When fruits start to form pedicles still erect with perhaps a bend but not usually reflexed.

Flowers in our specimen pale pink.

Stamen filaments 2.5 – 4 mm long.

1991 Oct 12th Flowering on Mt Heddrick. Not sure of this identification though James Turner was present. Didn't realise differences between stamen filaments.

1994 Oct 30 Recorded in Dawson R'way Reserve

2004 Oct 2nd " " "

Sent specimen to Herbarium as I thought it was G. sp. 3 but John Reid identified it as G. retrorsum because the leaf stalks & flower stalks had retrorse-appressed hairs.

Cieranium sessiliflorum

1990 Jan 25th Flowering all around the camping area at Wild Dog Creek, Wulgulmerang. The flower is pale mauve with darker stripes, short stalk. Flower about ½" across.

1992 Jan 30th Flowering at Mt Howitt.

1993 Jan 31 " in Errinundra NP

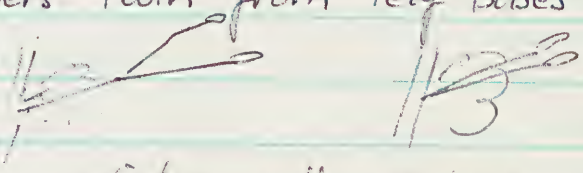
~~HC~~

Geranium Solanderi (Sheet 1) Cat-leaf Crane's Bill

1970 Jan 25th Flowering at Wild Dog Creek, Wulgulmerang.
1971 Jan 30 Flowering at Howitt Springs.
Sept 1. Plant growing in the Grampians.
1972 Aug 21 Flowering at Mt Arapiles.

Also sheet 2.

1959 Apr. 23 Flowering at Wirilda with deep coloured flowers. Some flowers twin on single peduncle and others twin from leaf bases with separate peduncles



Hairs on pedicles reflexed but not appressed. Stamen filaments 4 - 10 mm long.

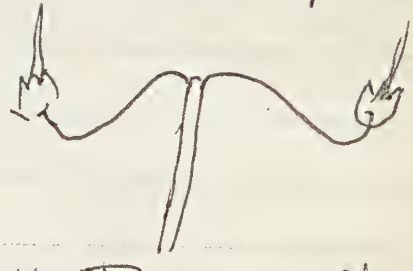
1992 Oct 25th Flowering on Clark's Road. Leaves 3 lobes with each lobe 3 times divided again & No seeds to check but Willis says both seeds are similar although G. retorsum could be almost black.

1994 Oct 30 Recorded for Dawson Rway Reserve
1995 Apr 12th " " Drain Water "
1994 Nov 9th " " Licola weekend.
1995 Oct 25 " " Mt Heddrick
1997 Jan 18th " " Livingstone Ck & Bentley's Plain.
Apr 5th Growing with seeds in APM Reserve - Grand Ridge Rd.

Geranium solanderi (Sheet 2) Austral Crane's-bill.

1988 Nov. 17 Collected specimens near garden. leaves almost circular but 5 lobed ½ way to centre into various numbers of lobes from 5-8 on our specimen. lobes further divided into three with centre lobe longest. Flower stalks long

Flowers on our specimen reasonably dark pink. Hairs on pedicles reddish and spreading. Fruits not ripe but pedicles reflexed as fruit form.



1994 Oct 25th Plants growing in Traralgon South Reserve without flowers yet; but identified it by its bulbous or turnip-like root. See Willis P. 318.

Oct 30th Plants growing in Dawson Water Reserve

Geranium sp. 2 Variable Crane's bill

Feb 13 Flowering at Wirilda near bottom of slope on Ollie's Track. There appeared to be both single & twinned flowers amongst the sprawling mass.

Flowers pale pink or white. to 7mm across. Petals 5 obovate, sepals longer than petals, long flower stalks with small glandular hairs & long spreading hairs.
Leaves upper surface ± hairless or very few hairs. Lower surface with sparse spreading hairs.
Most wide-spread of the species which have been split from G. solanderi
Good photo in CD.

Geranium sp 3. Pale Cranesbill

2004 Oct 2 Flowering at Dawson Railway station site Reserve. Comes next to G. solanderi in the key. Petals pale pink (to white), not bright pink; veined. Mucro on sepal hard to measure but certainly very small. Hairs on older stems appressed + downwards. Twin flowered. As I am not sure of identification I have sent down to Herbarium.

2005 Mch 3rd Reply from John Reid at Herbarium identified specimen as G. retrorsum because the stems of both leaf + flowers had retrorse-appressed hairs. Letter in Bob Parsons file.

Geranium Sp. 5.

2006 Sept 30 Growing at Senenis Track

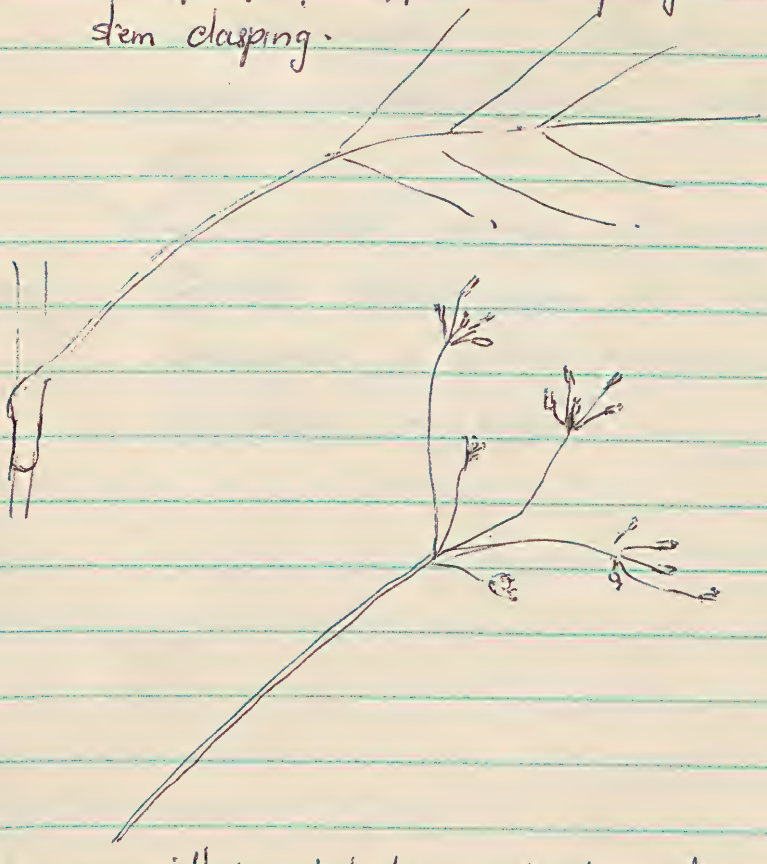
Geum urbanum Common Avens.

1994 Nov 9th Recorded for Nicola weekend
1995 Jan 15th " " Dargo weekend in seed.
1999 " 23rd " " Gelantipy weekend.

Gingidia harveyana

(Seseli harveyanum) Alpine Sesely.

1992 Jan 25th Flowering at Buckety Plain. Tiny white umbels of flowers with peduncles fairly long but pedicles short, leaves narrow pinnate on long stalk towards base of plant. Base of stalk stem clasping. Upper leaf just single blade but again stem clasping.



Flowers within tubular ridged calyx with tiny spreading white petals. Umbells have 5 flowers with mostly one long pedicle, two medium + 1 short or something similar. Very dainty flower. Identified by James Turner.

1995 Jan 15th Recorded on High Plains near lookout on Dargo weekend.

1999 Jan 23rd Think one of the specimens from Gelantipy weekend was this species. Excursion was on Rocky Plain & Emu Plain.

Gladiolus undulatus — Wild Gladiolus

1993 Dec 14" Flowering along the drain in Hazelwood Road about 200 m past speed sign on right-hand side travelling east.
Flower cream with undulating petals & sepals.
Flowers on only one side of stem & with long tubular section. Bract at each flowers.
Leaves about ½" wide and app. 18" long & very stiff.
Plant under name G. cuspidatus in Willis.

1994 Jan 4" Received letter from Dr. Parsons asking for voucher specimen & card records. Collected specimen this day & posted

dicarpa

Gleichenia (circinnata) Pouched. Umbrella or Coral Fern

1966 Feb. 6. On Sunday Road.
June 11th Through road to highway at Marlo.
1968 Jan 28th Wolfe's Swamp.
Apr 14th Home Bush.
Oct 20th Senini's Track.
1969 May 18th Willung South.
Oct 18th Rosedale
1972 Feb Mt. St. Gwinear
1978 Jan Synonymous with G. dicarpa. Tindale in Beadle et al., Fl. Syd. Reg.: 50 (1972). Willis (Rev. ed.) Ferns of Victoria + Tasmania: 59 (1973) [C. Beauglehole + R. Parsons]
1994 Nov 26th Growing in APM block Stradbroke Sth. Grpp. H'way.
1995 Apr 12th " " Drouin Water Reserve
1991 Jan 28th " " Tullock Ard or Betts Track on the Gelantipy Weekend.
1999 Jan 23rd Recorded on Gelantipy weekend.
2000 Dec 3rd " " Sweetwater Ck. Reserve.
2006 Sept 30th " " Senenis Track

Gleichenia microphylla — Scrambling Coral Fern

1968	Apr 14th	Home Bush.
1990	Mch 7th	Waratah Bay.
	Aug 29th	Darlamurla
	Sept 26	Near Chessum Rd Longford.
1995	Apr 12th	Drouin Water Reserve.

Glischrocaryon behrii

(Boudonia behrii) Golden Pennants

1972 Aug 28th Plant growing in little Desert.
Plant rather like broom spurge to look at though stems are round & smooth.
Very few leaves on specimen but what are there, are tiny ¼" to ½", alternate, turning upwards ending in very fine point.
Stems & branched turning upward
Buds dense hanging downwards on ends of branches.
Would like to see in flower.

1978 Jan Synonymous with Glischrocaryon Behrii (Orchard 1975) [C. Beauglehole & R. Parsons]
Auck. Inst. & Mus. 10: 160, 163.

Glossodia Major

1966 Sept 17th. Flowering profusely along Racecourse Rd. Rosedale. Many flowers had two flowers on them. Lovely large flowers.
Black bush flies seen on flowers.
Flower 1½" across.
Dorsal Sepal Separate
lateral Petals, Sepals Close together same size mauve Spotted with white at centre.
labellum - Heart-shaped though rather pointed. Half white - pointed half mauve.
lateral lobes only the raised top of heart.
Column - winged with almost transparent mauve wings. Deep purple support or stalk. Sticky patch under top of column. Pollen on triangular yellow head, flat side up ∇. and supported on straps attached to bottom of column. This enables pollen head to be moved to touch sticky part of insect.
leaf 1½" long lanceolate, broad at base, hairy, yellow green
Scape approx 1 ft. stem very hairy.

1967 Sept 16 Few flowers along Lime Pit Rd Rosedale
Oct 1 First flower in T'gon South Reserve but many buds
22nd Flowering along Clark's Rd. Also many double headed waxlips at Chester Park.
Nov 4th In seed. at Wolfe's.

1968 Sept 28th Flowering along Dalson Downs. The labellum of this glossodia moves upwards slightly. Does not seem enough to help insect but will watch more closely.
Oct 20th. Flowering in T'gon Sth. Res. A couple of stalks with 2 flowers. Also along Seniors

Track. Found 2 pure white ones here
Oct 27th Still flowering Tgon Sth Res.
1969 Sept 11th Flowering at Wilson's Prom.
" 13th " " Rosedale + Longford.
Oct 12th " " Tyrong North.
Nov 2nd " " Briagalong.
1970 Sept 13th " " APM. Reserve
" 14th " " Dutson Down Area.
Oct 1 " new Reserve Rosedale
" " " Heyfield
" 17th " " Briagalong
1971 Sept 1 Plants in bud + some almost flowering though we did not see one in flower in the Grampians.
Oct 10th Flowering in A.P.M. reserve. Also flowering in reserve area at Rosedale and along Lime Pit Rd.
" 24th Flowering in APM reserve.
" 27th " at Reid's Corner
1972 Sept 10th " " Rosedale
1991 Oct 12 Apart from usual colour in most flowering plants there was also a pure white flower.
1994 Oct 28th Flowering in Tgon Sth Reserve.
Nov 9th " at Licola.
1995 Oct 25th " " Mt Heddrick
2001 Nov 3 " " Newbarrough Bush.
2003 Oct 25th " " Anzac Rd + Big Tower Rd Mullungdung
The usual brownish flowers + also mostly yellow flowers on another plant but still had light brown blotches.
2003 Nov 1st Flowering at Edward Hunter Reserve,
2006 ~~Nov 4th~~ Sept 30 " " Serenis Track

Cilossodia minor Small Wax-lip Orchid

1984 Sept. Flowering under power lines east of Mallacoota.

Glyceria australis Australian Sweet-grass.

1999 Oct. 16th Flowering near Bonlac Wetland, Darnum.

Glycine Clandestina

Aug 27th 1966 Flowering in A.P.M Bush.
Dec 18th 1966 Still flowering in Foster's Gully.
1967 29th Aug Flowering in A.P.M. Bush
1st Oct " " near bush paddock Middle leaflet almost sessile
Dec 23rd Flowering Morwell National Park
1968 Aug 28th " in A.P.M. Bush.
1969 Feb 1. " at Tyers.
Aug 29th " at Granite Rock. On roadside near Granite Rock had climbed up tree & was flowering about 15 ft up.
Oct 11th Flowering at Heyfield
19th " along Clarke's Road.
1970 Jan 25th " at the Cobberas. Flowers both blue and white.
Aug 23rd Flowering at Gormandale.
Sept 26 " near Chessum Rd Rosedale
Oct 1 " new reserve Rosedale
17th " at Briagalong.
1971 Aug 16th " in our Garden.
Oct 17th " at O. Ladies.
1993 Jan 30 Flowering in Errinundra area.
1994 Oct 28th " " Tgon 5th. Reserve.
Oct 30 " " Dawson Water Reserve
1995 Apr 12th Growing " Drouin " "
1994 Nov 9th " at Licola weekend.
1995 Oct 25th " " Mt Hedrick
1997 Jan 18th " " Livingstone Ck near Omeo.
1999 Jan 23rd " " Gelantipy weekend.
2002 Nov 23rd " " Holey Plains State Park.
2004 Apr 3 " " Colley's Rd. Brock

Glycine latrobeana Cover or Purple Glycine

1982 Aug 27 Plant growing at Boisdale. Leaves orbicular, silky strigose, not in flower.

Glycine microphylla

1993 Nov 21st Collected specimens from Henderson's Road Toongabbie. This plant is stoloniferous and does not climb at all but is just a congested mat. It was growing in the shade of trees at their bases. There were 3 clumps of the plants.

Neville Scarlet thinks this is the identification & D. Parsons says they do not know its distribution. Neville says our specimens must be checked against an authenticated specimen at Melbourne herbarium.

1994 Mch. 20th Collected more flowering specimen with also some fruit. Collected from site 3km from junction of River Rd & Henderson's Rd, Toongabbie. Collected two groups of specimens from this site one with smaller leaves & one with larger leaves. Then we went up road 4km to where we found G. tabacina in Mch 1933. Could not any plants that I thought may be G. tabacina. These plants did have a very small petiolule on the terminal leaflet but the veins were the same as the other site. These specimens were collected from the north side of the road. Jeff Jeanes identified all three collections as G. microphylla.

GLYCINES

Tabacena	microphylla
Stems utorsely strigose to (appressed) to ± glabrous	± glabrous or hairy with weak white or light brown hairs
Leaves pinnately 3 foliate upper leaves 0.7–5 cm × 3–7 mm.	weakly pinnately 3 foliate. 1.5–5 cm × 1–6 mm
[illegible] – can be indented at apex broad upper surface glabrous lower " strigose	basal – palmately 3 foliate obovate to elliptic hairy white appressed.
Racemes 3–23 flowered 4 times as long as leaves Flowering spring to autumn	5 – 13 flowered 2 – 2½ times as long as leaves. all year.
Calyx strigose	Calyx glabrous or sparsely hairy.
[illegible]lard 5–10 mm long blue to purple or mauve	4.5 to 8 mm long. pinkish to purple
Pod 1.4–3 cm × 3–4.5 mm. ± downy	1.5–2.7 cm × 2.5–3.5 mm. sparsely strigose

Glycine Tabacina (Variable)

1969 Apr. 14th Flowering in A.F.M. bush where land has been bulldozed. Quite a number of plants. Leaflets 3 with middle one stalked twice as long as side leaflets (or more). Leaflets firm & rough to touch, not shiny, yellow green.
Flowers 9-12 on each raceme. Stalk of raceme 3.5 to 4 cm long standing above leaves. Stalk to leaflets 1.5 cm, leaflets:- 2 side ones 2.0 cm middle one 3.5 cm veins very noticeable :- all leaves approx 8 mm wide.
Calyx of flowers maroon, teeth shorter than tube.
Stalks all hairy back of leaflets light green with white hairs.
Stamens united almost to end forming boat with one free stamen on top.

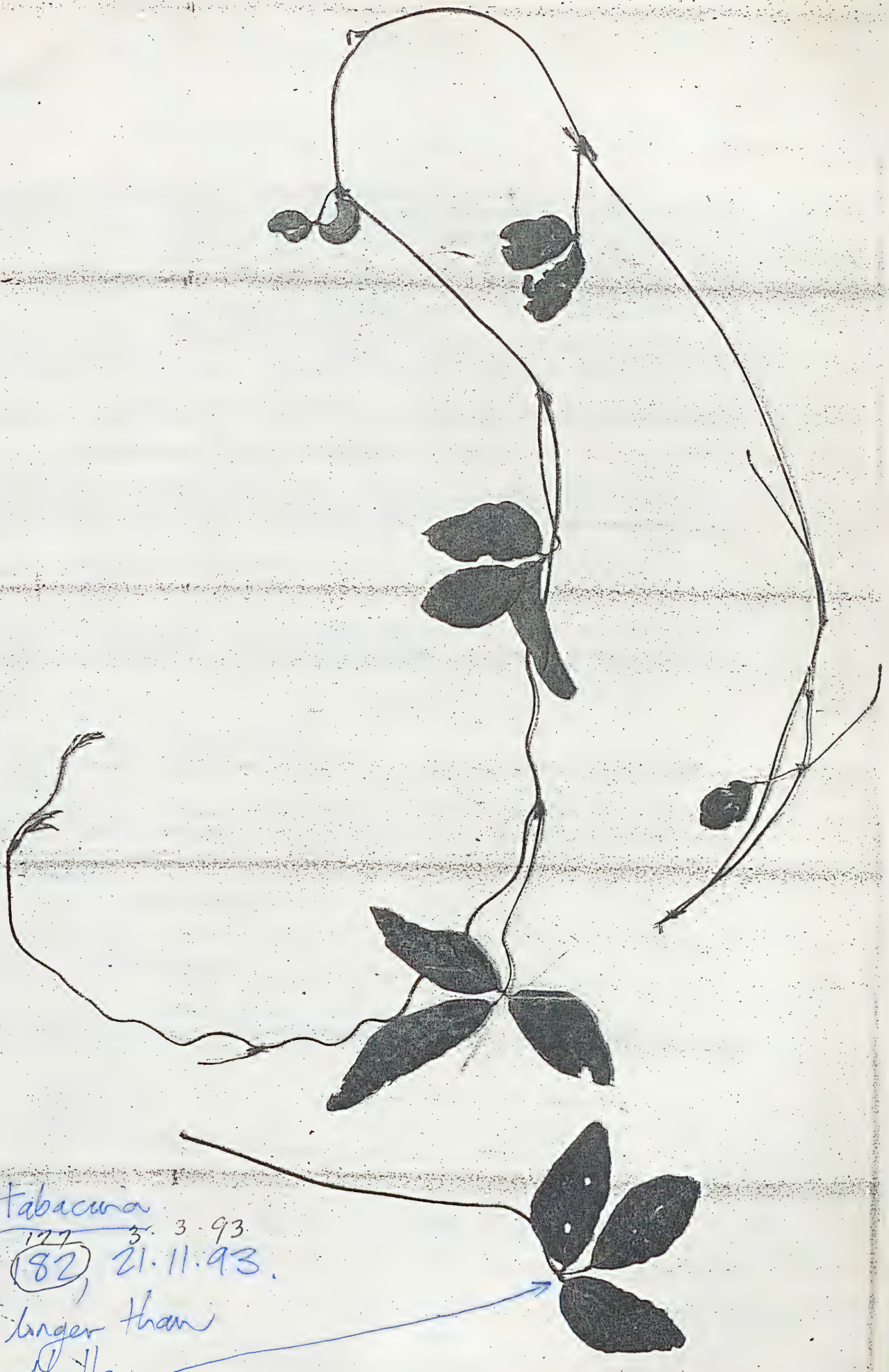
Flowers & leaf stalks commence at same point.
Pod flat, brown hairs, yellow green 2 cm long, pod extended where each seed is.
Leaflets at base of plant much more round or ovate than the leaves up further which are lanceolate.

1993 Mch 13th Flowering along drain on Henderson's Rd, Toongabbie. Central leaflet not very much longer stem than other two. Leaflets with distinctly reticulate veins. Sent specimen to Dr. Parsons. Neville Scarlett is of the opinion that this specimen is Gl. microphylla which has veins at right angles to midrib. To be sent to herbarium for positive identification.

1994 Mch 20th Jeff Jeanes is working on glycines for Flora

1994 Mch 30(cont)/of Victoria and is positive the specimen collected in 1993 was G. tabacina. See photostat. All 3 leaflets have petiolules + terminal leaflet has longer petiolule. Veins are also acute not at right angles. See comments in 'Dr Parsons' file. This is new record for T.

2003 Dec 1. Flowering in Maffra. on Fullions Road north of Morrison Street on roadside near Golf Course. Collected by John Topp + specimen = ent. to Herbarium for new small Grid record S54



Glycine tabacina
127 3. 3.93
Your coll. (82), 21.11.93.
Petiolule longer than
microphylla

Cinaphalium indutum (Tiny Cudweed.)

1985 Sept. 21st Flowering at Dawson Railway Stn. site
leaves whitish green, actually green with long white hairs
lying lengthwise along leaves giving whitish appearance.
Plant low cupp 2" high. Jean's book says plant is
branched, if so it is at ground level or just above.
Each "branch" then ends in a flower (sessile) as a cluster
of individual flowers, surrounded by 4 floral leaves forming
a circle or cup around flower cluster.
Involucral bracts in our specimen were magenta but
books say they can be from cream to brown.
Miss Cialbraith verified our identification
Not recorded by Parsons in 5 but recorded in Cliff's Hinterland.

1994 Oct 30 Growing in Dawson Water Reserve.
" " " R'way "

Cinaphalium polycaulon Indian Cudweed

1994 Oct 28 Growing in T'gon Sth Reserve.

Ciompholobium ~~muricatum~~ ecostatum

1969 Nov. 8th Flowering at Rubbish Tip at Wilson's Prom. ~~Flowers~~ are very red but fairly small and small leaflets are narrow & definitely in threes, joined at base.

Gompholobium glabratum Dainty Wedge-pea.

1991 Sept 7th A few flowers left on small bushes but by 11th all flowers had finished. Had trouble keying these plants out as the leaflets were in threes but the stems definitely tuberculate. However Beagle et al. says usually leaflets in 5, rarely in 3, so that lets our specimens out. Apparently leaflets can be from 4 to 7. Flowers were pale yellow but we did not collect one. Pedicle of fruit shorter than calyx & immature fruit 1 cm long and oval, and inflated.

Oct 1. Received our copy of Flora of N.S.W. & it describes a Gompholobium species B with aff to G. uncinata. This species have leaflets in 3, curved tiny stipules (needed microscope to see them) & tuberculate stems ends of leaflets with acute apex ending in a recurved point. All this fits above specimen. Ovules about 6 - ours 8. Mentions rocky soils in habitat - that fits. So without flowers I am inclined to think this is G. species B aff G. uncinata.)

Gompholobium Huegelii (Pale)

1966 Dec 4th Flowering Tigan Sth Reserve
1967 Nov 12th " Gormandale Reserve
25th " Andersons Track
Dec 29th " track near Moe. Walhalla road.
1970 Jan 18th " Seninis Track
1971 Nov 12th " at Reid's Corner.
1972 Sept 1 Plant growing near Flat Rock. I think certainly collected on that day.
Leaflets only joined at very base at yellowish section of leaf. Leaflets with recurved edges, about 1 cm long or less. Shrub very branched. Leaflets ending in fine, short, bent point. Leaf stalks & branches very hairy.
1973 Mch 11. Growing at Willung Sth.
1974 Dec 30th Flowering at Gormandale Tip.
1993 Jan 30. Flowering in Errinundra N.P.
1995 Dec 12th APM Block Stradbroke.
1996 Nov 23rd Old Port ~~Re~~ Trail at Nooramunga Coastal Park.
2002 Nov 23 Holey Plains State Park - Harrier Swamp.
2006 Sept 30 Growing at Senenis Track.

Gompholobium Latifolium (Bread Wedge)

1966 Oct 9th Flowering on Calligree Sth Rd. further along than Chester park.

1967 Sept 16th In bud al. Cormandale Rd. & Rosedale Rd.
Oct 8th Flowering on Calligree Sth Rd.
" 22nd " " " " " (Stamens all free.)

1968 Sept 17th " " Calligree Road.

1969 Sept 28th " " Rosedale.
Oct 18th " " "

1970 Sept 26 " near Chessum Rd, Longford.

1971 Oct 10th " Calligree Sth Rd.

1972 Sept 20th In bud in Rosedale

1994 Nov 26 Plant growing in APM block Stradbroke Sth. Gipp. H'way

1995 Oct 25 " " on Mt Hedrick

CONOCARPUS.

There are 8 species recorded in Victoria, but 2 are only recorded for east Gippsland (*C. montanus* + *C. serpyllifolius*) another (*C. mezianus*) is recorded for Little Desert, Casterton + Ballarat area. Surprisingly *C. leucroides* is also not recorded for T although it is relatively common in our area. before it was divided from *C. humilis*.
Of the 8 species in Victoria 3 are recorded for T (our area) and one is recorded in the west + north of the State and apparently fairly common there. In Flora of Australia *C. leucroides* is not recorded near our area either so perhaps we had better look very closely at this species before we record it again.

The key to the four species above is:—

1. Primary bracts of inflorescence opposite, at least towards the base.
   2. leaves ovate to broad-lanceolate, > 2mm wide (opposite)
      3. leaves + stems moderately to densely hairy with spreading coarse hairs — *C. leucrioides*.

1. Primary bracts of the inflorescence alternate.
   4. leaves all opposite on vegetative growth.
      5. Fruits with oblique calluses between ribs.
         6. Stamens 8, all fertile.
            7. Perennial herbs, usually > 35cm high, leaves lanceolate to narrow-elliptic — *C. tetragynus*
         6. Stamens # opposite sepals. — *C. humilis*.
      5. Fruits smooth or papillose between ribs.
         9 leaves ovate to circular; stems + leaves glabrous; fruit smooth. — *C. micranthus*.

C. elatus has all leaves alternate; plants with rather long spreading hairs.

My differences are not scientific as we do not always have the flowers, so I have set them out overpage.

Details	G. leucrioides	G. humilis	G. tetragynus	G. macranthus
Plant	Erect multistemmed	Prostrate or semi-prostrate	Erect or ascending	Prostrate, ascending or erect much branched.
Height.	20 - 40 cm	20 - 30 cm	15 - 30 cm	no height given probably as usually prostrate. Gunsop. anyway.
Stems	4 angled sparsely to densely hairy with spreading coarse hairs	Weakly 4-ribbed Scabrid with spreading tubercle-based hairs	Terete or weakly 4-ribbed appressed-pubescent with stiff hairs.	Terete, glabrous or rarely with a few hairs
Leaves	Decussate, ovate mostly 5-15 m x 5-10 mm. Toothed hairy as per stems. shortly petiolate 10-12 teeth	Decussate, opposite ovate 10-20mm x 5-12 mm Toothed, shortly petiolate. 10-15 small teeth	Decussate, lanceolate to narrow elliptic 5-15mm x 2-5 mm. Toothed ± sessile. 4-8 short teeth	Decussate. ovate to circular 4-15 mm x 3-11 mm. Toothed with many small teeth, glabrous shortly petiolate 8-20 small crenate teeth
Habitat	Widespread in open forest.	Widespread in damp places	Dry sclerophyll forest, heath & scrubland.	In heath & swampy areas & in open forest in damp sandy soil.
Recorded in Victoria. in "Flora of East".	East Gippsland	Our area & north.	From Q'land to SA. Border east coast.	Q'land border to SA. border & Tasmania East Coast on mainland.
Plant described	1828	1975	1805.	1784

As G. humilis was described in 1975 I suspect that it was separated from G. leucrioides. This was after Jean Galbraith & Dr. Jim Willis wrote their books.

There are 2 subspecies of G. micranthus but only subsp micranthus is recorded for Victoria.

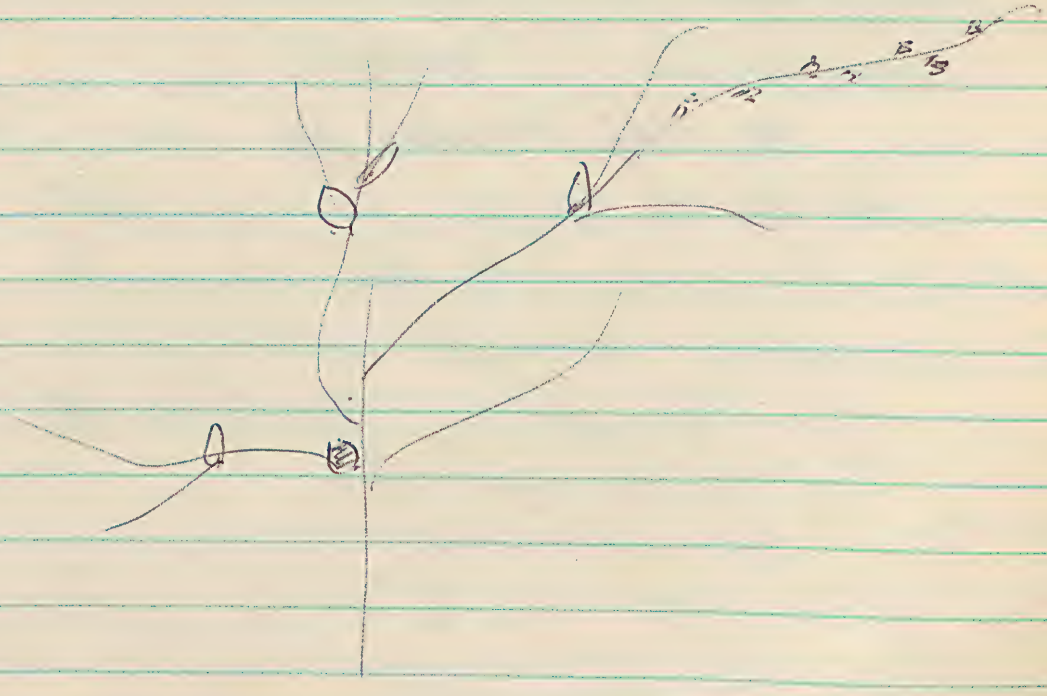
Gonocarpus humilis Shade Raspwort.

1999 Apr 5th Growing on Orchards Black - APM Reserve near Willung South on Girard Ridge Road.

Primary bracts of inflorescence alternate, leaves all opposite stamens 4 (opp. the sepals). Prostrate or semi-prostrate. to 20-30 cm high, stems weakly 4-ribbed, scabrid with spreading tuberculate-based hairs (short). leaves shortly petiolate. G. tetragynus has sessile leaves. G. teucroides shortly petiolate; plant with spreading coarse hairs quite visible on stems + leaves.

1997 May 17th Plants growing in bushland off Bill Schultz drive on former S.E.C land.

1997 Nov 15th Flowering along the Rail Trail. These plants had white flowers with pinkish backs to petals. Plants were also very spreading & branched where flowers were. Not sure of identification as not enough leaves.



Conocarpus micranthus

(Haloragis Micrantha) (Creeping)

1967 Feb 19th Plants found on disturbed ground at Wolfe's but not in flower.

March 4th Also found on Whitelaws track but not in flower

1967 Jan 14th Flowering at Anderson's Track. at spot where we had dinner.

1968 Jan 15th Found plant to Baw Baw near dried pool but could not find flowers.

Plant in garden was flowering at Xmas time so may be too late.

~~Dec~~ Oct 20th Flowering at Seniens Track

Dec 29th " at track near Walhalla Road.

1969 Feb 16th " Rosedale - swamp area

1971 Jan 30th " at Howitt Springs.

1972 Feb. Plants growing at Mt. St. Gwinear.

1975 Jan. Synonymous with C. micranthus

Orchard Auck. Inst. & Mus. Bulletin No 10 (1975)

[C. Beauglehole & R. Parsons]

Gonocarpus micranthus — Creeping Raspwort

1994 Nov 26 Plant growing in APM block Stradbroke Sth. Cipp. Hway
1995 Apr 12th " " " Drain Water Reserve.
Jan 15th " " on Dargo weekend.
1996 Jan 20th " " " Hotham "
2000 Dec 5th " " Sweetwater Ck. Reserve,
2001 Aug 27th " " Newbarrough bush
2002 Nov 23rd " " Holey Plains State Park.

Gonocarpus montanus

(Haloragis serpyllifolius)

1971 Jan 30 Flowering on plains at Howitt Springs. Leaves small as in H. micrantha but leaves are smooth and whole plant has an appearance of very small bush. Erect, branched standing about 2" high. otherwise mat-like, leaves opp., flowers in short racemes. at the ends of branches.

1973 Dec Flowering at Mt Baw Baw.

1978 Jan Synonymous with Gonocarpus serpyllifolius Orchard. Auck. Inst. & Mus. Bulletin No 10 (1975) [C. Beauglehole & R. Parsons]

Gonocarpus tetragynus.

(Haloragis Tetragyna) (Raspwort)

1966 Sept 9th Flowering Clark's Rd. Colour not very noticable. Flowering stems much branched with drooping groups of flowers.
Nov 13th Flowering at Cormandale Rd.
1968 Oct 26th " along Coll. Sth. Rd.
Nov 10th " " Clarke's Rd.
1970 Jan 18th " " Senini's Track.
1969 Nov 2nd " at Briagalong
1970 Jan 15 " along Licola Rd.
Oct 11th " at Heyfield
1971 Jan 30 " at Howitt ~~Plains~~ Springs
Sept 3rd Plants growing throughout the Grampians.
Oct 24th Flowering at Reids Corner.
Nov 12th " " Flynn.
1972 Feb Plants growing at Mt St Gwinear.
1978 Jan. Synonymous with Gonocarpus tetragynus. Orchard. Aust. Int. & Mus. Bulletin No 10. (1978) [C. Beauglehole & R. Parsons]
1993 Jan 30 Flowering in the Eminundra N.P. or nearby
1994 Oct 28 Growing in Tigon Sth Reserve
Nov 1 " " Casuarina Reserve Fulham.
Oct 30 " " Dawson R'way Reserve
1995 Apr 12th " " Drouin Water "
Jan 15th " " Dargo weekend.
Oct 28th " " Wonthaggi Heathland.
1996 Jan 20th " " Hotham weekend.
1995 Nov 12th " " Railway Reserve near Traralgon.
2000 Dec 3rd Flowering " Swelwater Ck. Reserve.
2001 Aug 27th Growing in Newborough bush.
2004 Apr 3 " " Colley's Rd. Block
2006 Sept 30th " " Senenis Track
2006 Nov 4th " " Springsure area.

Gonocarpus teucrioides.
(Haloragis teucrioides)

1973 Miss Galbraith reports this plant growing at Rosedale.

1978 Jan. Synonymous with Gonocarpus teucrioides. Also species G. humilis to add. to flora Orchard. Auck. Inst. Mus. Bulletin No 10 (1975) [C. Beauglehole & R. Parsons]

1991 Jan 26th Growing along Bett's Creek Road off Tulloch Ard Road near Gelantipy.

1993 Jan 30th Growing in the Errinundra area or NP.

1995 Apr 12th " " Drouin Water Reserve.

1996 Oct 12th " " Paradise Beach at 2nd pipeline in N.P.

2001 Dec 1 " " Sandy Ck Bush, Newborough

benthamiana

Cicodenia (amplexans) Clasping Cicodenia

1972 Aug 28th Plant growing on road to Little Desert near Cicadia glandulacarpa.
Stiff shrub about 1ft high, branches with many leaves alternate, pointing upwards close to the stem. leaves serrated at margins with 1 lobe on each side stem clasping.

leaves broadest at base. Young leaves so erect as to touch stem.

Under the microscope there are a few hairs on the stem + the leaves appear to be covered with tiny glands especially on the underside.
Dad reports plant also in Little Desert.

1973 Sept 3rd Plant growing in Whipstick - Bendigo

Goodenia Elongata (Lanky)

1967 Feb 19th Flowering in swampy gully a/r Wolfe's.
Dec 11th " opp. Welch's.
1968 Nov 10th " " "
1976 Nov 28th " along Phillips lane, Flynn.
1982 Jan 12th " in swamp near Yallourn Pumphouse
1991 Jan 26th " on Tulloch Ard Rd. near Cleantipy.
1994 May 1. Growing on Austen's property near Darlamurla.
1994 Nov 26th " APM block Stradbroke St. Cpp. Hway.
Dec 28th " " Tgon Sth Reserve.
This goodenia is not branched into a panicle.
1995 Oct 28 Growing & flowering on Wonthaggi Heathlands.
2001 Dec 3 " in Bob Johnsons Bush at Newborough near Sandy Ck.

Cioodenia geniculata

1973 Sept 2nd Flowering behind Golf links at Bendigo
1995 Oct 28th " on Wonthaggi Heathlands.
2007 Sept 3. " " " "
2006 Oct 12th " & Grampians

Goodenia Ceracilis

1969 Jan 14th Flowering along Anderson's Track making quite a floral mat on side of road, Tiny and colorful.

1968 Dec 29th Flowering along track near Walhalla Road.
1969 Jan 1. " " Anderson's Track.
1970 Jan 18th " " Seninis Track
Mch 28th " " Chessum Road. This plant was about 9" high, small flower and long narrow leaves. As this fits description in Miss Galbraith's book presume difference is due to swampy area where it was found.

Goodenia hederacea (spp. var.) alpestris (Iry)

1970 Jan 2nd Flowering at Tamborittha Saddle.

1971 Jan 17th Flowering along roads in Mt Useful area. Lovely vivid bright golden flowers, plentiful leaves . Creeping plant along the ground. Long stalks to leaves about 1 inch or more.

Jan 30th Flowering at Howitt Springs and on Mt Howitt Hike. Underside of leaves almost white.

1972 Feb. Flowering at Mt. St. Gwinear

1995 Jan 15th " on Dargo weekend.

1996 Jan 20th " " Hotham "

1997 Jan 18th " " Mt Nugong.

1999 Jan 23rd Recorded on Ciclantipay weekend.

Caladenia humilis (Swamp)

1969 Feb 16th Flowering Rosedale. - in swamp area Rosette of leaves - flower stalks branched.
1971 Jan 29 Flowering at Glenmaggie.
1981 Dec 29th Flowering in Swamp at Yallourn near pump house.
1984 Dec 29th Flowering along Boodyarn Road.
1985 Dec 28th " " " " Suspect this is a variable species. leaves can be so hairy as to be visible to the naked eye and yet others have fine transparent hairs that need the microscope to see them. Flowers vary too in number of hairs. All have branched flower stalks longer than leaves but not twice as long as leaves. Sizes of plants can vary a great deal too.
1990 Dec 18th Flowering along Boodyarn Road
1994 May 1. Plants growing in Austen's property near Darlamurla.
1994 June. 6. Flowering in Crinigan Rd. Reserve.
1994 Nov 26 Growing " APM block Stradbroke Sth. Gipp. Hwy.
1995 Feb 6 Flowering along Anderson's Track.
2001 Dec 1 " " at Sandy Ck Bush Newborough.
2003 Apr 4. Growing in Traralgon Railway Reservoir Reserve
2004 Nov. 28 Flowering in Ollerton Avenue Bushland.

Goodenia hederacea. (Trailing)

1966 Oct 22 Flowering along Anderson's Track.
Dec 29th Flowering in many places at Darlamurla.
1967 Oct 13th " at Haberlouche
1968 Jan 28th " " Wolfels.
Nov 3rd " Anderson's Track
1969 Jan 1st " " "
1990 Jan 18th " Seninis "
1969 Oct 12th " Tynong North
1994 Nov 26th Growing in APM block Stradbroke Sth. Gipp. Hway.
1995 Apr 12th " " Drouin Water Reserve.
1996 Aug 31 Jindivick hand-care area.
2000 Dec 3rd Flowering in Sweetwaters Ck. Reserve.
2001 Aug 29th Growing in Newborough bush.
Dec 1 " " " Sandy Ck.
2004 Apr 3 " " Colley's Rd. Block
2006 Sept 30 " " Seneris Track
Nov 4th " " Springsure area.

Goodenia macmillanii Purple Goodenia

1994 Nov 8th This plant was previously known as Gi. grandiflora
It was flowering on the roadside on the way to Nicola. We have known it there for many years & usually find a couple of flower on the long weekend in January.
There were over 100 plants in this spot this year in Nov although most of them were not in flower yet.
DCNR personnel went down into the Macalister Large from Cheynes Bridge. They were about 6km as the crow flies from the bridge & they found thousands of plants this year.

Goodenia Ovata (Hop)

24-9-1966 Flowering Ricardo's Rd
1967 Jan 4th " in Callignee Hills and in Traralgon Sth reserve.
7 Oct Flowering at Callignee
Nov 4th " " Cowwarr
1968 Jan 4th " " Bulga Park.
20th " " ~~Hott~~ Red Hill Rd.
June 22nd " in A.P.M. Bush.
Sept 3 " " Cowwarr.
Oct 13th " " "
Nov 10th " " Shingle Ck Reserve
1969 Feb 1st Flowers & seeds on plants at Tyers.
May 18th A few flowers on plants at Willung South.
July 20th Still flowering at Glengarry North.
Sept 4th Flowering well at Wilson's Prom.
Dec 15th " along Jeeralang Rd.
1970 Mch 7th " Waratah Bay
July 25th Just a few flowers at Rintoul's Creek.
Aug 26th " " " at Dargamurla.
Oct 11th Flowering at Heyfield
18th " " Briagalong
Nov 23 " " Lily Pily Gully. Bees were pollinating the flowers. Their weight forced the bottom petals down - then they popped their heads through the upper petals break to get the nectar.
1971 Jan 17th Flowering on road to Mr Useful.
Aug 22nd " at Loch Sport.
Oct 10th " at Rosedale
23rd " at Morwell Nat. Park
Nov 13th " " Cowwarr
1972 July 22 " at Fairy Dell.

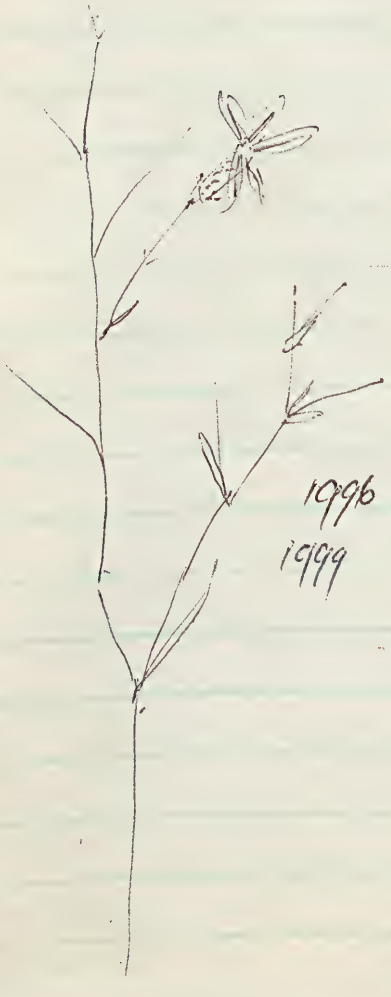
1973	May 15th	Flowering	at Rosedale.
	July 14th	"	" Tarengibbee North
	Aug 21st	"	" Boola Boola.
1994	Oct 28th	"	" Tgm Sth Reserve.
	Oct 30	"	" Dawson Water Reserve
1995	Apr 12th	Growing	" Drouin " "
	Oct 28th	Flowering	" Wonthaggi Heathlands
	Oct 25th	"	" Mt Kedrick
1997	Apr 5th	Growing in	APM Reserve — Grand Ridge Rd.
2000	Dec 3rd	Flowering in	Swelliwater Ck. Reserve
2004	Apr 3	Growing in	Colley's Rd. Block.
2006	Sept 30	Flowering	- Serenis Track.

Goodenia paniculata Branched.

1981 Mch. 19th Flowering Morwell West off Kay Road. Plant app. 1ft high. Flowering stalk much branched with small bracts at each branch. Flowers finally single. Calyx lobes tiny, calyx with glandular hairs. Plant quite pretty when freshly in flower. Flowers yellow-brown on back.

1983 ~~Mar~~ Dec 11th Flowering along Anderson's Track past Early Road on side of road.

1995 Dec 12th Flowering at Stradbroke on A.P.M bush property. Flowers yellow, plants herbaceous, largest leaves basal, flowers distinctly pedicellate, on ~~many~~ + leafless bracteate panicles at least twice as long as leaves (our specimen panicle gen from 1st branch) usually 6-18" high. Calyx lobes ± 2mm long. leaves obovate to oblanceolate, irregularly toothed minutely hairy to ± scabrid, sepals manifestly glandular-hairy. leaves tapering into long petiole



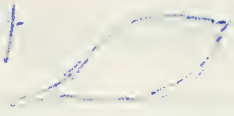
Pedicles with pair bracteoles ~~at base~~ halfway up ; Although it looks a bit as if these bracteoles may be where more buds ∴ pedicles may immerge. leaves - smaller than basal - up stems and appearing stem clasping. Paniele very branched.

1996 Apl. 21st Flowering in lot 213a Rosedale.

1999 Mch 13th " at Marsh's property Stradbroke.

Goodenia ~~glauca~~ varia

1912 Aug 29th Growing in Gilton Gorge - Flat Rock area. Plant inclined to be spreading Stem. leaves glabrous but pitted with white spots like many goodenia especially varia. leaves alternate with flower stalk at each leaf base. leaves mostly entire but sometimes with odd teeth towards apex. leaves tapering into stem. Stem has a few scattered hairs.

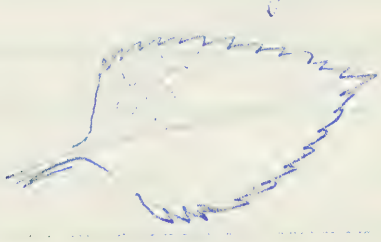


Stems 15" to 2ft long.

Im not sure of this identification. This plant was the non-viscid form showing how variable it can be. Miss Galbraith identified this plant.

See p. 2

1972 Aug 29th Plant growing in Flat Rock area or Colton George. Plant glabrous and a bit sticky leaves shiny bright green, with definite teeth about 2mm deep, long stalks, alternate. Flowers apparently axillary on long stalks the ~~lanceolate~~ linear about 5mm to 1 cm long. leaves 4 cm long and 3 cm wide



Goodia Lotifolia (Golden Tip)

24-9-1966 Flowering along Mountain hut Rd. and Darlamurla

1967 Oct 8th Flowering at Frank's Turn-off.
" 22nd " Cormandale Rd

1968 Oct 6 " along Calligree 5th Rd.
" 13th " at Stoney Creek. very tall compared with bushes around here. Appr. 7-8 ft high.

1970 Sept 10th Flowering in the Jeeralangs. Dad reported while at work.
Oct 17th Flowering at Briagalong

1991 Sept 3rd Plants growing at Mt Drapiles.

1994 Nov 1 Plants " " Casuarina Reserve Fulham

1996 Aug 31st Tindivick Land-care area.

1997- As per Muelleria Vol. 10 1997 there is another species of Goodia in Victoria but by distribution records in both Muelleria + Flora of Vic Vol. 3 it does not grow in our area. An easy distinguishing feature is:- in G. lotifolia the aril is attached to the seed by an elongated bifid foot 1.4-1.8mm long while in G. medicaginea the aril is attached to the seed by a short almost undivided foot to 1mm long. (In other words the aril attachment is not expanded at all in G. medicaginea).

Grammitis billardieri — Finger Fern

1967	Sept 10	Morwell Nat. Park. South Cascade.
1968	Feb 18th	Traralgon Creek Gully.
1970	Apr. 18th	Glen Nayook.
1972	July 16	Tarra Valley

Grammitis (poeppigiana armstrongii)

1971 Jan 30 Mr Morrison found this plant in the Mt Howitt area. Mr Turner also found it in the Bryce's Gorge area. It is just separated from the finger fern as the sori coagulate in irregular patterns rather than the regular stitch-like pattern of the finger fern. Rare plant in Victoria.

Cirtiola nana.

1990 Jan 2nd. Flowering at Tamboritha Saddle.
Whole plant very small and close to ground.

Jan 24th Flowering at Rocky Plains, Wulgulmerang.
1991 Jan 30 " " Howitt Plains
1995 Jan 15" " on Dargo weekend.
1996 " 20" " " Hotham "

(Austral Brooklime) Gratiola Peruviana

1967 Jan 14th Flowering in swamp area opp. Waterlily pond. Yallourn Nth. Flowers at base of leaves. (Miss Galbraith identified)

Feb 12th Flowering in sphagnum moss on Wolfe's property.

Nov 4th " " " " " " "

Dec 10th " LeRoy Rd

23rd " Morwell National Park

1968 Jan 28th " Wolfe's swamp.

1971 Jan 17th " at Springs near Mt Useful.

Oct 23rd " in Morwell Nat. Park.

1978 Jan Synonymous with G. latifolia Burtidge & Gray Fl. A.C.T. 326 (1970) [C. Brauglehole & R. Parsons]

1994 Nov 26th Flowering in APM block Stradbroke Sth. Gipp. H'way.

Oct 28th " " T'gon Sth Reserve.

Oct 30 " " Dawson Water Reserve.

" " " " R'way "

Dec 12th " " Railway Reserve near Traralgon

1999 Jan 23rd " " Gelantipy weekend. Identified from specimen brought back.

2003 Apr 4th Flowering in mud where water had receded around lake at T'gon Railway Reservoir Reserve. These plants were large compared with what I remember. Branches were app. 1 foot long & leaves & flowers larger too.

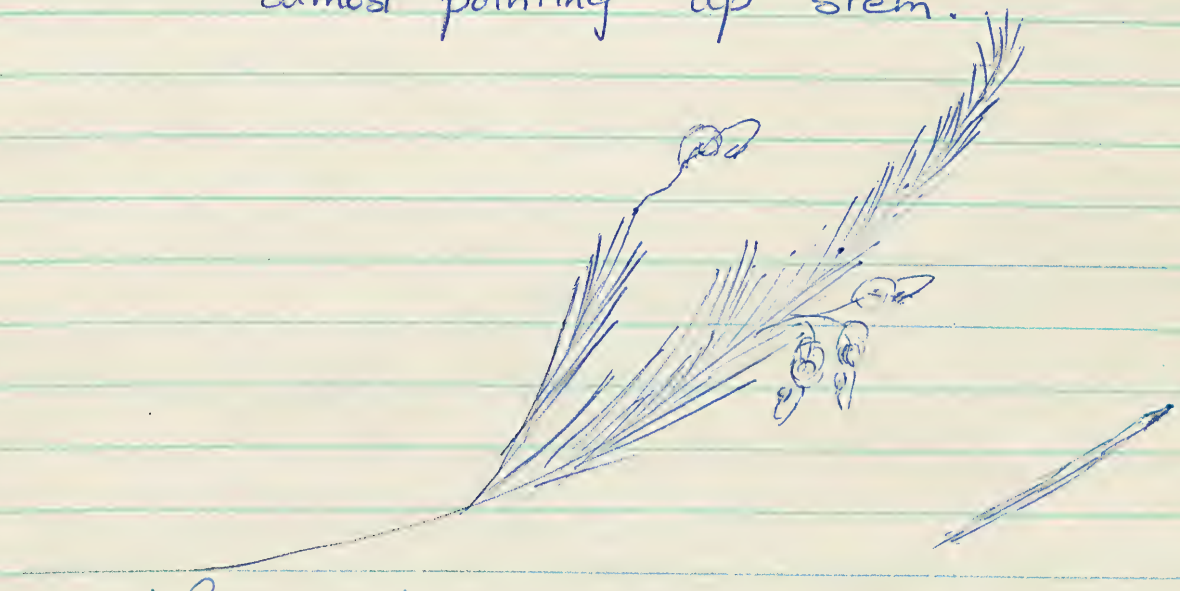
2005 Mch. 3 Flowering again in Railway Reservoir Cons. Res, T'gon

Cratiola pubescens Glandular Brooklime

1996 Nov 7th Flowering in Giffard Rifle Range.
1999 Oct 23rd " " Ciellion's Run

Grevillea

1974 Dec 7th Flowering on roadside at Bennison Spur. Plant very grey & stiff. leaves 2 to 3 cm long with recurved margins so that they almost meet & give a grooved appearance on the underside. Apex of leaf acutely pointed but not pungent. leaves almost pointing up stem.



Flower glaberous on outside but villous on inside - deep red. Ovary silky hairy. Style with hairs at least at base. Style bent back on itself. leaves glabberous above but hairy on undersurface.

Miss Galbraith said she thinks it is a hybrid of G. rosmarinifolia and G. lanigera.

Some of the leaves seem scabrous and certainly the main branch is very scabrous.

Grevillea alpina — Mountain Grevillea

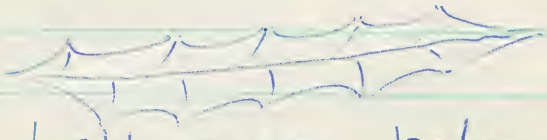
1971 Aug 28th Flowering throughout the Grampians. Very variable plant usually about 1' to 1'6" high but some higher. Flowers lovely bright red colour but we did find some specimens almost all yellow. Flowers with hairs on them.

1972 Aug 29th Flowering in Grampians.

1973 Sept 2nd Flowering at One Tree Hill – Bendigo. Colouring green, pale pink, red etc)

Cirerillea Aquifolium Prickly.

1971 Aug 31. Flowering on Rose Gap Trip + also Wonderland Tour in Grampians.
Plant very variable, some plants with so many hairs as to make foliage appear grey, others with fewer hairs on upper surface of leaves + more shiny effect.
Leaves Veins continue to each pungent point, app. 5 to 6 on each side



leaf slightly twisted as in holly
Light green below but darker green above.
Flowers - toothbrush - red stigmas with green flowers. App 1" long.
Buds - very woolly
Stem - brown + very woolly

1972 Aug 27th Flowering in Little Desert.
2006 Oct 12 " Grampians - Mt Arapiles South.

Grevillea australis

1970 Jan 2nd Flowering at Tamboritha Saddle. Tiny white flowers on low almost prostrate bush. leaves narrow lanceolate - plant spiky because of ends of leaves.

1971 Jan 30 Plants growing on Howitt Springs and on Mt Howitt Hike. Plants had seeds on them but not quite mature.

'974 Dec 7th Flowering at Tamboritha - Bennison Plains. Bushes are about 2'-3' high x across. Flowers very tiny.

Jan 29th Flowering at Buckety Plains.

1983 Dec 4th Flowering at Waterfall in Moroka - Wonangatta NP. very strong perfume.

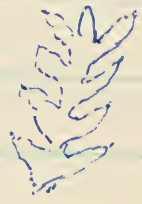
1985 Nov 2nd Flowering at Carey's lookout (Bryce's Gorge)

1995 Jan 15th " on Dargo weekend.

1996 " 20th " " Hotham "

Grevillea Barklyana (large leaf)

1967 June 24th. Tree pointed out on Warragul excursion

Tree 20ft high leaves wavy with shape  Point on each lobe of leaf. Dark green above but pale below.

Grevillea Chrysophaea (Golden)

1966 Sept 17th Flowering in Rosedale Reserve. Rather low bushes with flowers near the ground. Plants along Callignee 5th Road near Chester park much taller and flowers along branches. 3 or 4 flowers grouped together. Perianth a reddish brown Many ants on these plants, even the taller bushes.

Aug 28th Flowering along Sunday Rd.

Oct 15th Flowering further along Callignee 5th Rd. near mass of Gompholobium and also along Gormandale Rd.

1967 Aug 13th Flowering along Callignee 5th Rd near Chester Park.

Sept 16th Flowering along Lime Pit Rd. but almost finished

" 24th Still flowering in profusion at Chester Park.

Oct 22nd " " at Chester Park.

July 21st Flowering " " "

Aug 10 Flowering profusely at Gormandale.

Aug 20th " in our garden

Sept 15th Still flowering along Gormandale Rd & in reserve.

Oct 6th Still flowering along Callignee 5th Road.

" 20th " " " " "

1969 Feb 16th Seed pods empty, oval, hard, with long curled point split at bottom edge.

Apr 4th Along Sunday Road found many young plants of the flower but could see no mature ones. Area had been burnt so this could explain it or perhaps plants are not long lived but in this case they would not all die the same year.

May 18th Plants growing near Bushy Club Moss at Willung South. In this area there seemed

to be two varieties of this plant. One was the usual broadleaf variety that grows erect. The other was a narrower variety with leaves also thinner to touch - this variety tended to be prostrate or spreading and low - certainly not erect - tall as is usual for this plant. The same varieties were noticed at the swamp area along the Lime Tip Road Rosedale. We grew one of the spreading plants in the garden for a couple of years - it continued to be spreading only about 1ft high.

1969 Aug 4th Flowering at Rosedale.
29th " " Providence Ponds
Sept 13th Still " at Rosedale
1970 Jan 2nd This plant growing at Tambaritha Saddle although not in bloom.
Mch 21st Flowering in Cormandale Reserve
Aug 23rd " in " "
23rd " at Holey Hill Trig Tr.
Sept 5th " " New Area, Rosedale,
26th " in pines at Longford.
Oct 1 " in new area Rosedale.
11th Plants growing at Heyfield (Mt)
Nov 25 " " at Briagalong.
1971 Sept 19th " flowering beautifully at Whitelaw's Track area and along Sunday Road.
Oct 10th Flowering Pallingee 5th Road - Rosedale
1972 Sept 10th " at Rosedale,
1973 May 13th " " "
1991 Oct 12th " at Mt Hedrick. These flowers appeared more hairy than usual.

NEIL MARRIOTT
BOX 107, STAWELL
3380. 4/4/05

Dear Bob,

Geoff Carr has sent me the Grevillea specimens for checking. The large plant with fine leaves is not a Grev. asmarinifolia - it looks like a Grev. juniperina hybrid and is probably Grevillea 'Audrey'. It used to be common in the nursery trade in the 1970's.

The small pink one looks like it definitely is a hybrid between G. 'Audrey' and G. chrysophaea.

Regards,
Neil.

Grevillea chrysophaea P.2. Golden Grevillea

1994 Nov 9th Flowering on Licola weekend.
1995 Oct 7th " " reserve near Heyfield Rifle Range.
These flowers were very, very, hairy with tan hairs so that the petals were not visible.
Dr Parsons says this form is that described in Willis, He & Neville Scarlet have suggested that I send a specimen of the local form to. W. M. Molyneux, P.O. Box 386, Yarra Glen 3775, Neville Scarlet thinks it possible our local specimen may be G. alpina but can't be sure without floral bracts. As floral bracts are deciduous as the bud swells it is too late to get them this year. Collected some
Nov 11th flowers at Tyson Sth Reserve on 11/11/95 and will send to W.M. Molyneux.
See letter from WM Molyneux after photostat.
Nov 29th Collected specimen from Mt Heddrick area which was midway between the two specimens collected above for hairiness.
Oct 25: Recorded for Mt Heddrick.
Muelleria Vol 8 No 3 1995 P311 Description of G. celata similar to G. chrysophaea growing near Bruthern. Flowers with short mixed hairs mainly white with some lightly ferruginous. Plant root suckering.
About Nov. Flowering at Garmandale Reserve. Also here were 2 or 3 plants of a form with pale pink flowers. Sent sample to Bob Parsons & got reply back from Neil Marriott, Stawell to say it was hybrid between G. chrysophaea & a hybrid of G. juniperina known as G. 'Audrey' known in nursery trade in 1970s. This second grevillea has apparently been planted in the reserve at some time as it was quite a reasonably sized bush.

(1)

Friday
Nov 24th

Dear Bob,

I received your letter just as Sue and I were leaving for Mollecoota, so we went through your area late on Friday.

G. chrysophaea as it is currently known is regarded as a "variable species". Now this statement covers a multitude of sins.

As you will see by my recent paper separating G. celata from both G. chrysophaea and G. alpina — G. chrysophaea has a disjunct distribution pattern, and with occurrences on varying rock and soil types. The western population in the Brisbane ranges has had a long separation and as such

Varieties, even within populations so (apparently) close as some in Gippsland are can still exhibit characters differences fairly rapidly when exposed to local soil, nutrient, water, temperature pressures; this doesn't though on its own say that they are necessarily genetically very diverse

But the reverse also applies, and there is much support ~~for~~ for changing the species concept to embrace a more 'population Biology' parameter, with chemical and other fingerprinting being utilized in decision making

Currently though G. chrysophaea is held as a diverse species, but one in which work in progress may change this status to other levels

Regards

Bill Molyneux

Grevillea. ~~dryandra~~ - dryophylla.

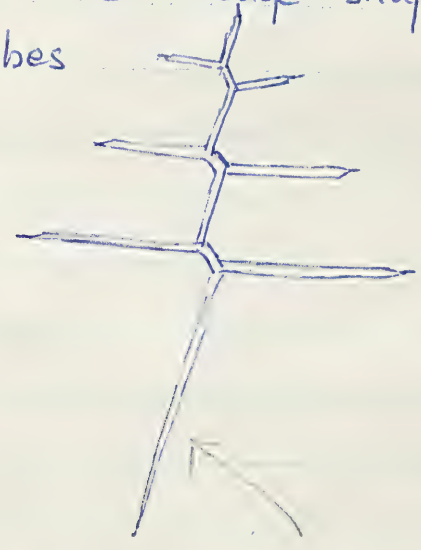
1973 Sept 2nd Plant growing at Diamond Hill at Bendigo and flowering.

1994 Oct 28th Flowering in Tgon Sth Reserve.

Grevillea ilicifolia — 'Holly Grevillea'

1972 Aug 28th Growing on road to main road from the corner of the little Desert. Unfortunately this plant was not flowering.

leaves are wedge-shaped but consist only of lobes



leaves dark ~~blue~~-green on the upper surface. The undersurface is rather yellowish + pale. Edges of leaves curved under

Black mentions a var. lobata from NW Victoria He describes it as with lobes long, linear or lanceolate.

Grevillea laniger a.

1969 Sept 13th Flowering along road to Longford.
Also in bush area at Rosedale.

1970 Jan 25th Flowering at Rocky Plains, Wulgulmerang.
Oct 17th Plant but no flowers at Briagalong.
Identified by Mr Cane. Leaves much more like rosemannifolia 3 cm long dark above edges slightly rolled under, greyish white below. caused by dense hairs. Stem also very hairy.

1973 Mch 17th Plants flowering near Lake Tali Khan.
Flowers deep red, glabrous outside but hairy inside. Flowers in terminal racemes leaves yellowish green short hairs & 'pimples' above but whitish because of long silky hairs below. Margins recurved covering half back of leafs. Leaves ending in abrupt point but not pungent. Plant much brighter green than ones at Rosedale.

1985 Nov 2nd Flowering on road up to Tamboritha. Erie Lubcke says this form is known in nurseries as var. Tamboritha. Flowers yellow & red & leaves much more rigid & fine.

1991 Jan 26th Plants growing on Tulloch Ard Rd. near Gelantipy.

1994 Nov 9th Flowering on Licola weekend.

1999 Jan 23rd Recorded on Gelantipy weekend.
Ellen reports this plant is on track down to one of the beaches at the Prom & also at Dalsun Rd.

2000 Sept 29 Flowering at Glenmaggie

Grevillea Lavandulacea lavender Grevillea

Aug 28th 1966 Flowering Sunday Rd.
This specimen probably Chrysophaea.
The species growing in Mr. Lindner's garden